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DETROIT MEDICAL JOURNAL

DETROIT, MICH., AUGUST, 1901.

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NO. 5

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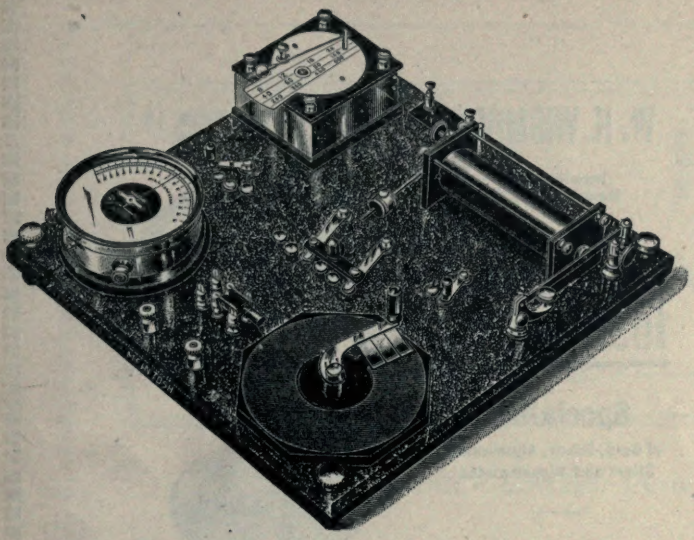

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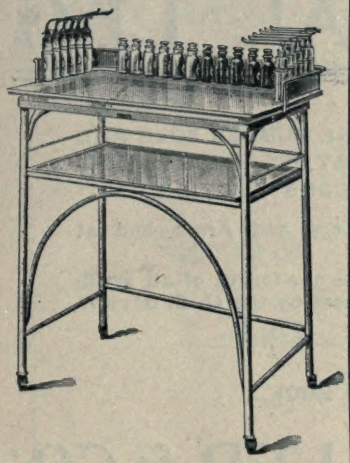

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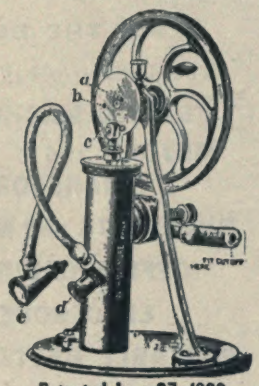

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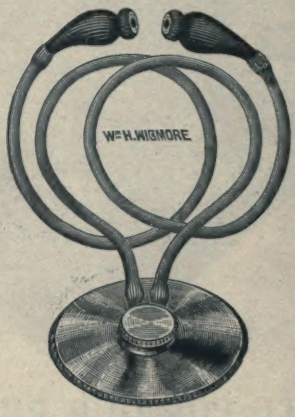

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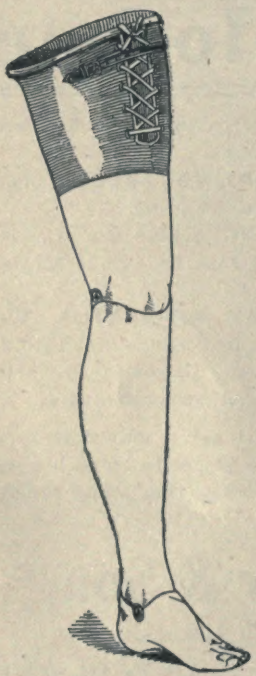

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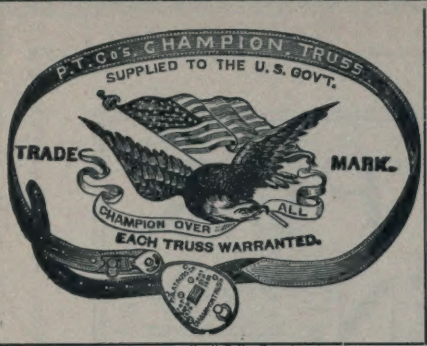

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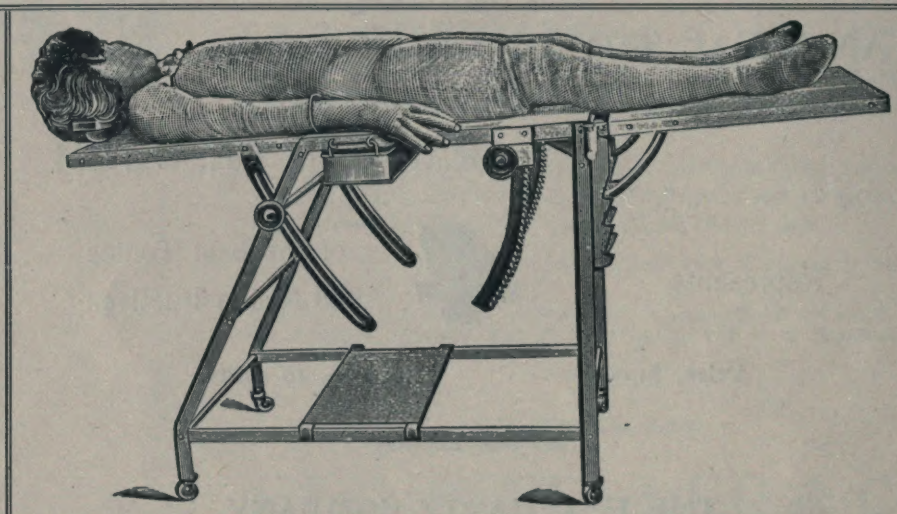

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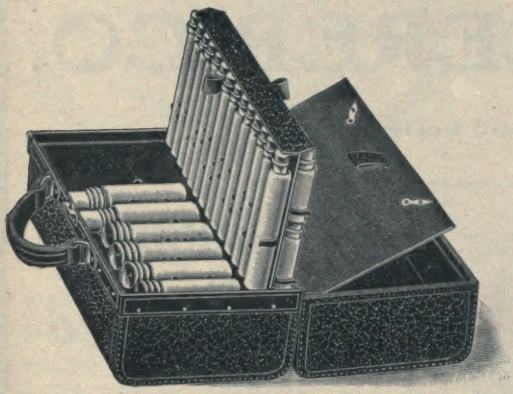

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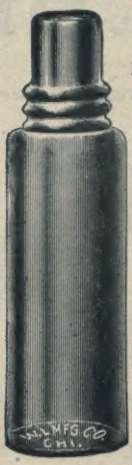

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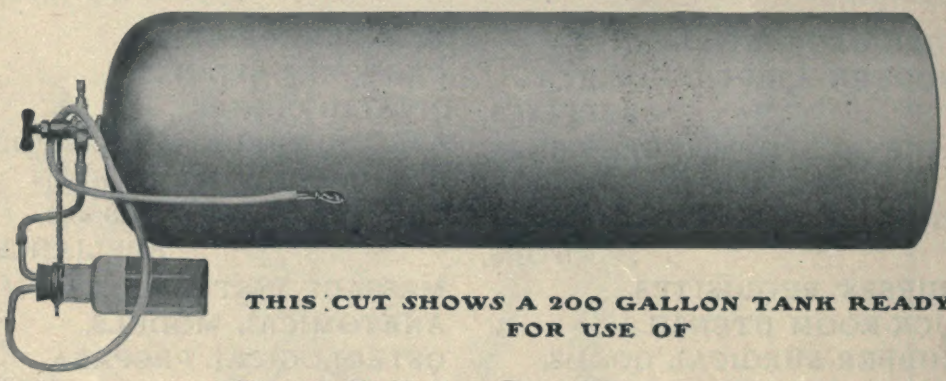

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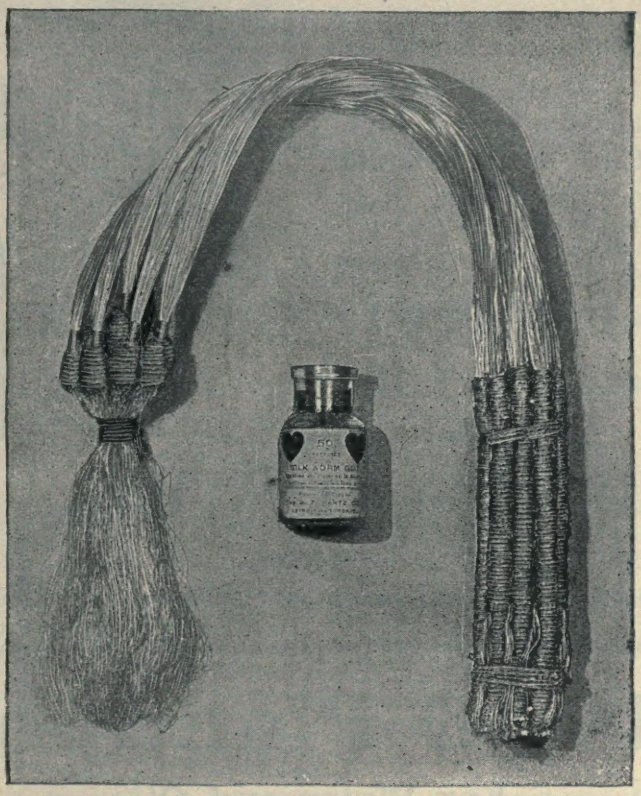

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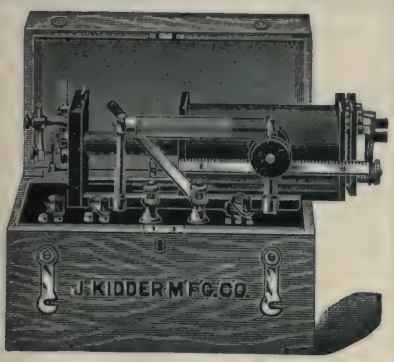

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Original Articles.

SPINAL PUNCTURE.

BY ANGUS McLEAN, M. D.

This subject has excited very general discussion during the year passed, and still evidences being in its infancy. Strange to say, though at first deemed a procedure wholly surgical in character, latterly it has become of equal interest, if not paramount, to physicians. It embraces three distinct procedures, each differing vitally in results, viz.:

Lumber puncture and subarachnoidal anæsthesia for general surgical work:

Spinal puncture for the removal of cerebro-spinal fluid:

Epidural puncture for the production of analgesia and the administration of soluble drugs.

Subarachnoid cocainization is gradually but surely spreading, meantime taking place among operations of the first rank and utility. Cocaine was first used as a local anæsthetic to mucous membranes; subsequently stronger solutions were employed subcutaneously to limited areas; later in diluted solution it was combined with morphine and salt (Schleich's formula) to anæsthetize extended areas; again, was injected into the nerve trunks, and finally; introduced into the vertebral canal for its direct action on the lateral portion of the spinal cord.

Spinal cocainization is a purely American idea, first instituted in 1885, by Doctor Leonard Corning, and was the accidental outcome of certain experimental researches. Two years since the subject was revamped by Bier, of Germany; and later taken up by Tuffier, of Paris, who demonstrated the applicability of the method to operations below the diaphragm. Since August last, the operation has been generally accepted and employed in the various medical centers of the world, and especially in the United States.

The application is made by placing the patient in the sitting posture with the spine flexed, and injecting into the lumbar region of the spinal canal an aqueous solution containing from one-fifth to one-third of a grain of cocaine muriate, preferably in the form of a two per cent. solution. Many special devices have been instituted to facilitate this operation, and even needles of gold or platinum have been devised, which obviously entail unnecessary expense, since I have employed, successfully, needles of finely

*Read before the North-Eastern District Medical Society, Port Huron, Michigan, July 25th, 1901.

drawn crucible steel, with trocar inserted. So too, inexpensive all-glass syringes, and glass syringes with rubber-tipped pistons answer every purpose, as either can be sterilized by boiling, and moreover discarded after employment if desired.

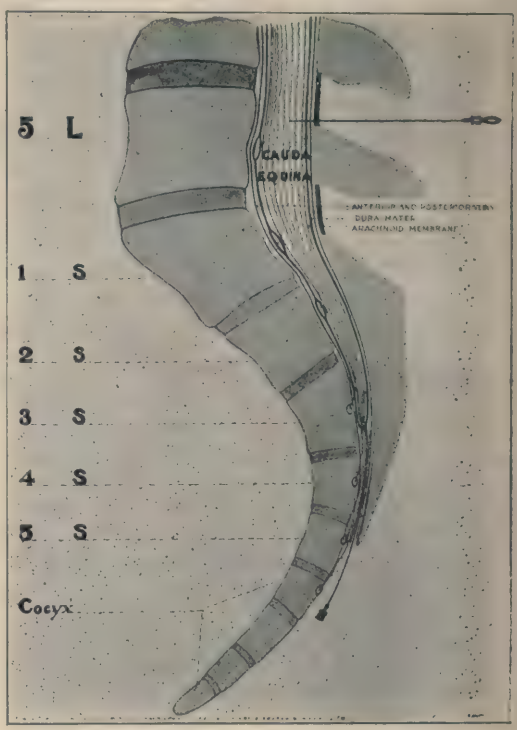
The needle is inserted through the lamellar space of the fourth and fifth lumbar vertebræ, — the usual locality, though a space or two above will answer as well,—the tip of the spinous process of the fourth lumbar vertebræ affording an excellent guide, particularly as it is on a level with the crests of the ilia; it is entered about one-half inch from the spinous tip (laterally), and directed inwards toward the median line until the vertebral canal is reached, when if in proper position, spinal fluid will follow withdrawal of the trocar.

The cocaine may be prepared in different ways: By dry sterilization,—and a known quantity carried in an envelope and dissolved in the required amount of sterilized water: Or it may be dissolved on a water-bath and the solution subsequently put through a Chamberlain filter. With either, and careful sterilization of needle and syringe, there is very little danger of infection, and I have yet to learn of a case of sepsis following this operation.

The injection affects patients differently: In some analgesia is secured in from eight to twenty minutes, while in others it only obtains after a lapse of half-an-hour. Its first manifestations are in the soles of the feet, then gradually extending upwards to the umbilicus, and as high perhaps as the clavicle—I do not know just why this difference should be, but have imagined it due to the locality in the canal reached by the cocaine, or the amount of cerebro-spinal fluid present.

The injection not only differs in its analgesic properties in different individuals, but induces widely different symptoms: Some become pale and nauseated in a few seconds, with ultimate emesis, these phenomena being accompanied by tremor of the lower extremities and slight evidences of shock; others again will exhibit no signs of gastric or circulatory disturbances, or indeed any other untoward or unpleasant symptoms—they merely become talkative, and appear to be stimulated by the drug.

The most constant and annoying distress that follows the operation is head-



ache—frequently of most severe character and referable to the occipito-cervical region,—that comes on from three to six hours after the injection, persisting perhaps from twelve to eighteen hours (in severe cases, three or four days, as happened in one instance); it may also be accompanied by rigidity of the muscles of the occipito-cervical region, that is not readily relieved by ordinary therapeutic measures. It may here be remarked that tropo-cocaine does not produce the unpleasant after-effects that accrue to co-

caine, and that Willy Meyer* employed it in genito-urinary surgery with great satisfaction; also Schwartz† employed it in sixteen cases with equally successful results, the dose being from one-half to four-fifths of a grain; but personal experience with the drug in two cases is not corroborative, and it did not appear to produce complete anæsthesia.

During the discussion of spinal narcosis at the Thirtieth Congress of the German Surgical Association, convoked at Berlin the present year, Mikulioz reported its satisfactory employment in forty cases, predicting it would speedily become one of the most important methods of anæsthesia, particularly when it is better understood; also Bier presented records of 1,200 cases operated on by the method, at the same time pointing out that a great difference exists as to the amount of cocaine required to produce the desired effect,—the amount varied from one to three centigrammes; he tried eucaine, tropo-cocaine, and other drugs, with but limited results; and in many instances symptoms of cocaine poisoning supervened, such as rise of temperature, nausea, vomiting, dizziness, chills, circulatory disturbances, paresis, etc. He remarked "the operation demands further investigation before being generally adopted."

In my experience, the most annoying symptom is the severe headache which —though in many instances mitigated by the use of bromides, codeine, hyoscine and nitroglycerin—is with difficulty relieved. Just what is the cause of the cephalalgia has not been definitely settled; Bier lays great stress on maintaining the equilibrium of the spinal fluid—i. e., to allow the same bulk to escape as that of the cocaine solution to be introduced; nevertheless I have seen very severe headaches follow this precaution, even when closely adhered to. The drawing off of the few minims of cerebro-spinal fluid, in which to dissolve the cocaine, and then reinjecting, has been tried but did not succeed in obviating the headache; it is therefore doubtful if the alkaloid is the cause of the suffering, particularly as the same symptom accrues to the use of a saline solution, or even simple distilled water. It goes without saying, however, that the solution should be of the same temperature as the body.

There are many cases in which this form of anæsthesia is preferable to that obtained by inhalation, more particularly peritonitis, distension of the stomach and intestines, kidney disease, pulmonary difficulties, and cardiac maladies. I have operated by this method some thirty times, and am of the opinion it is about as difficult to select the patient on whom it will act favorably, as to determine beforehand one which will act well under the ordinary general anæsthetics. I have seen the strongest men suffer most severely from its effects and, *per contra*, I recently operated on a lady, aged seventy, for senile gangrene, amputating above the knee, who did not appear to suffer in the least; upon being returned to her room she immediately asked for a cup of tea, which was greatly relished, then sat up in bed during the day as if nothing had occurred.

In all instances in which I employed this procedure, there were no manifestations of sepsis or spinal irritation; and I have recently seen some of those operated upon six months since who never had any manifestations of secondary trouble.

I am of the opinion that subarachnoid narcosis has a useful position in the field of surgery, but do not believe the boundaries of its domain have been sufficiently delineated. Again, it cannot be hoped it will wholly supersede general anæsthesia for all operations below the diaphragm, at

Medical News, April 15th. 1901.

†*Centralblatt fuer Chirurgie*, March 2nd, 1901.

least not until more perfect methods of *technique* have been adopted, or some preparation of cocaine developed, or selected, that will be followed by less distressing symptoms that at present obtain.

Spinal puncture for the drawing off of cerebro-spinal fluid for the purpose of relieving pressure and headache has been practiced in a number of instances. Marie* reports a case of severe headache in the course of Bright's disease, not at all amenable to ordinary therapeutic measures, in which he withdrew six cubic-centimetres of cerebro-spinal fluid by lumbar puncture with the happiest of results. La Guidré states that a house-painter, a victim of lead poisoning and suffering from myosis, cephalalgia and insomnia, was restored to comparative health by removal of thirteen cubic-centimetres of cerebro-spinal fluid; he also resorted to lumbar puncture in a number of cases of meningitis with benefit; and likewise observed that the withdrawal of a few minims of fluid relieved the headache that supervenes upon spinal narcosis.

The epidural or extra-dural method is of comparatively recent date, the originality whereof is claimed by Cathelin and Sicard, of France, though the majority of writers concede to the prime originator of subarachnoid narcosis, viz.: Doctor Corning. This belongs less to the domain of surgery than that of medicine, and is recommended as a superior method of administering the soluble drugs usually employed by the mouth, rectum, or by subcutaneous or intravenous injection. The dura mater of the spinal canal is continuous with that of the cranium, and not attached to the inner wall of the spinal canal though sheathing the spinal nerves through the foraminæ when they leave the vertebral cavity. The space between the spinal wall and the dura contains fatty tissue and lodges the anterior and posterior meningeo-rachidian veins, that run the entire length of the canal, are devoid of valves, and supply a ready avenue for the absorption of remedies injected; hence the favorite point for epidural injections is the sacral canal. Again, the dura becomes obliterated opposite the third sacral vertebra, leaving the portion below this point (about two inches) filled with loose tissue and veins; and owing to the non-development of the laminæ and spinous processes on the lower sacral vertebræ, the canal is open, and easily punctured and entered at a point about two and one-half inches from the top of the coccyx (in the adult), where is formed a triangular depression, the apex upwards, surrounded by three small tubercules. By passing the finger firmly along the coccyx and lower portion of the sacrum, the free V-shaped margins of the canal may be detected. The space between the lateral tubercles is about one-half inch, with an anterio-posterior diameter of one-fourth inch; but the size and shape of the opening differs in individual subjects, and on some occasions the anterio-posterior walls almost obliterate this space.

The patient is placed in the knee-chest position, the tip of the left forefinger kept on the apex of the triangle, when the needle (held on a line with the body) is inserted into the canal, tilted slightly posteriorly in order to follow the posterior convexity thereof, and passed in from one inch to an inch-and-one-half. There is no danger of wounding any vital structure by this method, for the meningeal sacs, as already intimated, become obliterated about two inches above the terminus of the canal, and are only continued downward as the filum terminate. The sacral nerves, covered by the prolongation from the dura, occupy the lateral margins of the canal, and need in no way be interfered with if the needle is carried along the center. After the opera-

*Bulletin de La Societe de Medicine, Paris, May 9th, 1901.

tion is finished and the needle withdrawn, Chipault requires his patients to assume the Trendelburg position in order to facilitate the dissemination of the medicament, while Sicard prefers the lateral decubitus on the affected side. I employ a needle two inches long and slightly curved to correspond to the curve of the sacrum.

Since personal experience with this latter method has been limited, I offer the evidence of some of its earliest advocates:

Cathelin* reports brilliant successes in a number of instances from the use of cocame in the treatment of neuralgia of the legs, sciatica, lumbago, lightning pains of tabes, parturition, diseases of the rectum, etc.; likewise large doses of chloral in tetanus, and the soluble salts of mercury in cerebral syphilis. Sicard† reports equally fortunate results. Colville entirely relieved three severe cases of sciatica by injecting a mixture of guaiacol, orthoform, and benzoic acid in oil of sweet almonds.

Epidural cocainization does not anæsthetize the skin but only the deeper structures, and analgesia takes place in from four to five minutes and persists from two to three days—the amount employed is from one-third to three-fifths of a grain.

This method of administering soluble drugs is quite simple, and scarcely more dangerous than the ordinary hypodermatic injection. I believe it will prove to be a most useful and advantageous acquisition in the field of medicine.

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PERI-TONSILAR SUPPURATION.‡

BY HENRY J. HARTZ, M. D.

As the nomenclature of diseases ought to suggest something of their ætiology and pathology, it is of interest to note that the ancient Greek writers designated the majority of throat diseases as *paristhmitis*, a term equivalent to the more modern *amygdalitis;* later writers employed the term *cynanche,* which more properly refers to an œdematous type that is accompanied with dyspnœa.

Prior to the advent of bacteriology, the terms *Angina superficialis* and *A. phlegmonosa* were selected as descriptive of superficial and deep sore throat, and these forms when attended by sloughing were described as "diphtheritic."

The ætiological factors were held to be chemical and mechanical irritations, as well as meteorological influences, such as exposure to cold and wet which, together with a *locus minoris resistentia,* initiated in the mucous membrane an inflammation which sometimes became epidemic. However, with the growth of pathology and specialism, designations such as œdema, phlegmon, and erysipelas of pharynx and larynx, obtained, intended solely to differentiate the precise form of inflammatory process. Sir Felix Semon, of London, pleads that phlegmons of the pharynx and larynx, laryngeal erysipelas, pharyngeal œdema and Ludwig's angina, are identical diseases in-so-far as pathology is concerned, and consequently that they should be so classed, and preferably as acute septic inflammations. All are due to the entrance of germs into the tissues through abrasions of the mucous membrane, and they merely represent different degrees of virulency: Again, the inflammatory changes merge so gradually from the serous form to the purulent that it is impossible to at any point draw a definite line of demarcation between the œdematous and the suppurative, the purely local and those complicated by systemic affections. Semon cites (along with certain autopsis), in support of his views, fourteen cases of acute septic inflammation of the neck and throat, some of which were followed by pericarditis, pleurisy, pneumonia, peritonitis and septicæmia; and in all the coccus form of micro-organism had found ingress through sections of the protecting surfaces of the mouth and the

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La Presse Medicale, Paris, June 15th, 1901.

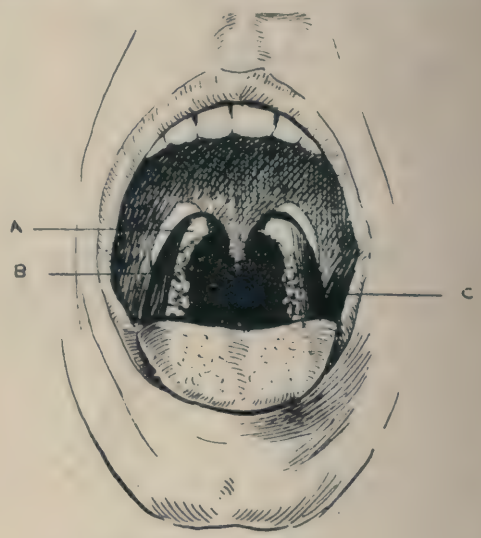
†*Ibid*, June 19th, 1901.

‡(Read before the American Rhinological, Otological and Laryngological Society, New York City, May 22d, 1901.)

peri-pharyngeal region,—usually the tonsils are at fault. He firmly believes that the tonsils form a natural portal for the entrance of germs which, by means of the lymph channels or blood-vessels, invade the economy.

The foregoing evidences, or at least suggests an identity with that class of concealed infection which the older clinicians observed, and to which Leube, of Germany, gave the title *crepto-genetischer-septiko-pyemia* as evidencing the disease generated within a crypt or fold of membrane. Von Jurgenson explains this disease from the standpoint of bacteriology and pathology and believes that the *strepto-* and *staphylococci* are the exciting agents; the former is found within the cellular tissues, acting through the lymphatic channels and inducing septic inflammation, while the *staphylococcus* is found in the blood stream and consequently may be deposited at any vulnerable point within the economy. The primary location of the germ is, frequently, in the throat, whereby a simple faucitis may initiate a systemic infection, though more often it is apt to be a phlegmonous angina that calls into existence profound conditions of septicæmia.

Recent German literature contains interesting autopsy reports confirming Von Jurgenson's views: These show that an infection often results from a chronic, latent, tonsilar abscess, by way of the lymphatics and extending to the peri-tonsilar region, thence to the mediastinum, leading to purulent pleurisy, pneumonia, pericarditis or pyæmia. These post mortem investigations are instructive, inasmuch as they prove that cocci may be encapsuled by connective tissue cells and held quiescent, just as the bacillus of tuberculosis is walled up within the tubercle. The encystment of the *staphylo-* and *streptococcus* is not so firm as that of the tubercle bacillus, and, therefore, an acute angina may develop a solution of continuity whereby the germs are permitted to invade the organism at large. Latent chronic abscesses can not be diagnosed *in vivo*, the tonsils presenting a clear surface; but upon section five or six small cavities may be exposed, some of which are confluent; the walls of these abscesses indicate by their thickness and other signs, their latency. The *streptococcus* within these abscesses can be traced by microscopical search through the lymph vessels to the mediastinum, and the suppurations of the latter are found fresh and new as compared with those in the tonsils—the pus has burrowed from these glands through the cellular tissues and mus-



A.—Supra-Tonsilar Fossa.
B.—The Tonsil.
C.—Plica-Triangularis.

cular interspaces to the organs affected. Goodale, of Boston, has shown the existence of acute abscesses within the parenchyma of the tonsils during life, and, moreover, discovered *streptococci* invading the peri-tonsilar tissue by way of the efferent lymph-vessels.

The literature of the last half decade presents abundant evidence that the tonsils, having direct interchange with the lymphatic vessels, permit of the entrance of microbes, and the observations of the older clinicians are substantiated by the investigations of bacteriology and pathology. The connection between circum-tonsilar and tonsilar suppuration is so intimate that, for the

purposes of ætiological discussion, they may be considered as identical. Just as the brain and its blood-vessels are infected through a suppuration of the middle ear, so the circum-tonsilar tissues are invaded secondarily to tonsilar and fossa disease; at the same time there are other sources of infection such as caries of the teeth, nasal operations, abrasions of the pharyngeal membrane, etc.

The tonsils are especially prone to infection owing to a constant evolutionary process or metamorphosis tending to obliteration, in evidence of which may be cited the fact that peri-tonsilar diseases occur chiefly in adolescents and junior adults (up to the age of thirty-five), or during the time that retrograde changes or atrophy of the lymphoid tissue obtain. The anatomical relationships of the tonsil with the plica triangularis and the supra-tonsilar fossa are important factors in the induction of tonsilar and circum-tonsilar suppuration—the plica triangularis and the supra-tonsilar fossa become structurally altered, especially in children, as the result of disease. The inflammatory exudate produces not only adhesions but likewise connective-tissue bands between the fossa, the plica, and the tonsils, that result in occlusion of the orifice of the former and of (some at least) the crypts of the tonsils. The secretions thus confined under pressure form a favorable nidus for the development of pathogenic bacteria that, under normal conditions would remain innocuous. The ensuing inflammation and consequent hyperæmia, affect the integrity of the epithelium lining the crypts, the destruction of which may be only superficial in depth and microscopic in extent, but sufficient to allow the ingress of germs, and any obstruction of the crypt will favor the encystment of the pyogenic agents, thereby resulting in lacunar or intra-follicular abscess. The suppuration may be encapsuled, or it may empty itself into the faucial space: Again it may extend outward towards the cellular investment of the tonsils to form a retra-tonsilar abscess: It may also discharge into the supra-tonsilar fossa, or if, perchance, the orifice of this fossa is closed by adhesion, the pus is apt to burrow its way in the line of least resistance, entering the pharyngo-maxillary space, thereby inducing a typical peri-tonsilar tumefaction high up in the soft palate. The anatomical obstruction of the tonsil and fossa is brought about largely by the plica triangularis, which owing to its vascularity provides the material for adhesions.

The plica is a triangular shaped membrane which has been termed the capsule and the operculum of the tonsil. It was first described by His, the German embryologist, along with the supra-tonsilar fossa, in 1885, and the designations thus bestowed by him are part of the world's nomenclature. The plica arises from the anterior pillar, which becomes visible at the fifth month of fœtal life, and in a typical case extends from the upper posterior portion of the pillar backwards and downwards until it is finally lost in the tissues at the base of the tongue. From its position it often covers over that portion of space not occupied by tonsilar tissue and known as the supra-tonsilar fossa; it is likely also to obstruct the mouths of a number of the tonsilar crypts thereby damming up the secretions and furnishing excellent culture grounds for germs. A plica adherent to the edge of the tonsil gives rise to the formation of elongated cavities extending one or two inches behind and towards the base of the tonsil. Also, some of the lacunar orifices may be obstructed by the envelopment of the plica, and thus secretions accumulating become decomposed, whereby the absorption of this morbid material may induce hypertrophy and suppuration extending often to the cervical glands, and is frequently the means of initiating an attack of circum-tonsilar inflammation. The plica also is often adherent to the apex of a hypertrophied tonsil, both together obstructing the fossa: An abnormal amount of adenoid tissue may extend into the space sufficient to interfere with its capacity, predisposing

the fossa to suppurative processes. The plica and supra-tonsilar fossa are nearly always demonstrable in the young and middle-aged; and coincident with atrophy of the glands the fossæ become shallow and the plicæ recede toward the posterior pillars and traverse the inter-faucial spaces obliquely downward. The intent of Nature in providing the plica appears to be somewhat obscure, yet the concensus of opinion is that its purpose is to afford a support to the tonsil, and to protect its buccal surface from injury.—The peri-tonsilar abscesses that have come under my personal observation have all exhibited an extraordinary, if not abnormal, development of the plica. This membrane, too, sometimes, retains within its folds and in the cavities, decomposing substances that develop as the result of its adhesion, and thus often becomes a potent factor in the production of fœtor of the breath.

Obstruction to the natural channels of drainage then, may be definitely held as one of the exciting causes of tonsilar and peritonsilar suppuration, though such predisposing factors as exposure to cold and wet, occupation, habits, age, etc., undoubtedly have a more or less remote influence. Another exciting cause is the presence of some of the ten varieties of cocci that obtain within the tonsil or mouth. The *strepto-* and *staphylococcus* are normally present, but innocuous until such time as predisposing factors permit them to multiply and develop inflammatory processes. Some difference of opinion exists as to whether the germs enter the tonsils primarily through abrasion, or secondarily through the blood and lymph streams, and it is conceivable that both avenues may carry the infection. The lymphoid tissue of the tonsils and the contiguous regions with their capillary circulation, constitute a *locus minoris retentia,* or a "physiological wound" as Gerhard aptly terms it. Articular rheumatism following tonsilitis is in all probability caused by the deposit of germs by the blood or lymph channels in the serous membranes of the joints, and has been bacteriologically proved to be a suppurative process. It is true that malnutrition and the consequent deposit of crystalline material in the muscles and joints, usually termed uric acid rheumatism, is a predisposing factor in determining suppuration. About one-quarter of my cases of peritonsilar abscess had suffered from pain indefinitely described as, or termed rheumatic. The obstruction to crypts of tonsils and orifices of the supra-tonsilar fossæ are the chief causes of suppuration, in proof of which may be cited the fact that when the obstruction is thoroughly removed no recurrences take place, even in those cases that suffered from articular rheumatism.

Peri-tonsilar suppurations are attended at times by only a mild exudation and slight œdema which disappears rapidly through resolution and absorption, but in the majority of instances they become circumscribed and result in the formation of abscess. The duration of this septic process depends greatly upon its location, and the degree of virulency of the pathogenic agent but, at the same time, the resistence of the individual also plays an important rôle. A temporary encystment may induce an atypical course.

The obstructions to the channels of drainage in the tonsilar region may be so firm as to force the purulent secretion to burrow in the pharyngo-maxillary space, and thus prolong the suppurative act. Moritz Schmid reports cases of only one month's duration wherein both the tonsils and the pillars were successively invaded: I, also, personally observed an instance in which, after an acute tonsilitis, the left throat was involved including the posterior pillars, and wherein the pus ultimately made its way to the right throat inducing so great congestion as to interfere with deglutition,—the liquid food ingested was regurgitated into the nose. In this case, oft repeated incisions failed to reveal pus sufficient to account for the condition; but after two months a rupture oc-

curred spontaneously in the region of the soft palate on the side first affected, and the patient recovered without further complication.

At a recent meeting of specialists in Paris, the subject of recurring peri-tonsilar abscess was discussed, when Doctor Cartaz presented a case (in a man aged fifty), which, after an attack of acute tonsilitis, developed recurring abscess twelve times during four months; through a fistula in the upper anterior pillar some drops of pus escaped every five days. Vertical incision led to the escape of considerable purulent fluid but this, even aided by an irrigation with a two per cent. solution of chloride of zinc, did not cure, recurrence taking place in fifteen days. Finally, a drainage tube was inserted between the anterior pillar and the tonsil, and removed on the third day, its place being taken by a cat-gut loop; also carbolic and chloral douches were administered three times daily; the abscess cavity then emptied and healed.

Chattelier recalled two similar cases which he believed to be due to glandular retention crypts.

Roault had a number of such cases and held that the fistula must be carefully sought by pressing upon the anterior pillar from below upwards, or *vice versa,* with a blunt probe, when a drop of fœtid pus will usually be seen in the orifice of a fistulous tract. These were all chronic peri-tonsilar abscesses, five of which occurred in women of from twenty to thirty-five years of age, in whom the fistula opened in the thickness of the arch of the palate. This variety of chronic abscess of the palate, he believed, had never before been described.

Saint Hillaire had seen many fistulas of the tonsils and of the peri-tonsilar tissue; he deemed the former easily cured by extirpation of the gland, while the latter he found exceedingly stubborn—some are so deep it is impossible to open completely by means of a bistoury.

Chappel, of New York, cited ten cases wherein hæmorrhage was a sequel to peri-tonsilar abscess; the bleeding occurred some days after spontaneous evacuation. Eight of these had a fatal termination, while two were saved only by ligating the common carotid: One case bled five days after incision had been made that evacuated one-half ounce of pus from an accumulation in the posterior pillar. An incision through the anterior pillar and washing and packing of the pharyngo-maxillary space usually led to recovery, though not without rheumatic complications, which were evidences of metastatic invasion.

Recurring abscesses are mostly situate within the pharyngo-maxillary space. The danger and gravity arising from abscesses and erosion of the vessels of the neck can not be too greatly emphasized, since the pus may burrow along the walls of the latter and thus reach the mediastinal space. Cobb, of Boston, believes that the styloglossus and stylo-pharyngeal muscles form a diaphragm for the protection of the great vessels of the neck from infection, and to uphold his claim demonstrated this fact on the cadaver by injections of cacao butter; he showed at the same time that the space is made up of loose connective tissue and fat cells, into which he was able to force four drachms of the butter. That this space is in close relation to both tonsil and fossa, and that it nearly always contains purulent fluid, is apparently evidenced by the extreme bulging of the region of the soft palate. This tumefaction is apt to prove most misleading as it merely differentiates the highest point of the abscess cavity and not the spot where is the greatest accumulation of pus; consequently the classical incision midway above the superior arch is in these cases ineffective.

In two cases wherein I was summoned late, I incised the abscess at its lowest point, which was near the wisdom tooth of the lower jaw.

When an incision is made, it should be by means of sterilized instruments in order to prevent mixed infection, and frequently

the abscess is due to the action of one species of germ alone. Leland's method of using the sterilized finger after incision with a view of tearing the tonsilar tissue and thus reaching the pus-sac, seems a painful (and withal in hard tonsil is an impossible) procedure, but it has the advantage of locating the direction of the abscess and is free from the danger of wounding the branch of the ascending pharyngeal artery in the anterior pillar of the fauces. Instruments of a blunt character, as employed by Pierce and Kyle, permit of opening the supra-tonsilar fossa without danger to this blood-vessel.

To avoid recurrence of peri-tonsilar abscess, it is essential the abscess cavity be irrigated and drainage established from its most dependant part. It is my experience that while tonsilotomy and igni-puncture may hinder recurrence, such is not always infallible. Radical excision of the upper part of the tonsils, removal of plica triangularis, and breaking up of adhesions wherever the channels of drainage are obstructed, are to be recommended. Sometimes curettement of the fossa, followed by an application of trichlor-acetic acid, is sufficient. Obliteration of the crypts of tonsils is best accomplished by extirpating the entire gland, although the punch forceps have proved of great utility in my hands in cases where but a few crypts were diseased. I have employed the galvano-cautery loop and cautery knife with good effect in some instances, and thus rendered the operations practically bloodless; the use of supra-renal extract also aided to free the field of operation from sanguineous effusion. Operations upon the plica are more painful than upon the tonsil, but the topical application of a ten per cent. solution of eucaine and infiltration of the tissue by Schleich's mixture, will mitigate the pain sufficiently for all practical purposes. When adhesions of the apex of tonsil are deep in the floor of the fossa, and firm to the semilunar margin of the anterior pillar, two vertical incisions may be made, one between the anterior pillar and the tonsil, and the other between the tonsil and the posterior pillar, extending well up into the soft palate; the gland can then be seized and dragged to the median line where a horizontal incision severs it, when the remaining lymphoid tissue may be removed by the scissors—an operation that leaves the supra-tonsilar orifice wide open.

The pathology of acute septic inflammation renders it unlikely that drugs can be of much value in the management of these maladies. Sometimes, if seen early, they may be aborted by a liberal dose of mercurous chloride—such is always indicated in suppurations—followed by the administration of tincture of veratrum or tincture aconite (which may also be combined or given alternately) every half hour, in one-half minim doses, until a relaxing effect upon the arteries obtains and full diaphoresis is established. Local scarification and topical application of heat will assist in reducing the congestion and in dispersing the accumulated fluids, but after twelve hours treatment, if no abatement of inflammation is had, medication should give way to operative processes. The local application of heat and inhalation of vapors, together with rest in bed, are of extreme value. Gargling is too painful a process to recommend, but a local spray of four per cent. solution cocaine is grateful whenever the pain is intolerable. All else failing, on the third or fourth day an incision may be made under local anæsthesia at the lowest point of tumefaction, which will co-operate with the advancing suppuration and favor an early termination of the abscess.

In summarizing I would emphasize:

That the obstruction of the orifice of the supra-tonsilar fossa and the orifices of the crypts of the tonsils, predisposes to circumtonsilar suppuration directly and, any vulnerable part of the organism remotely:

Early incision at point of origin, which is usually within the supra-tonsilar fossæ, or within the crypts of the tonsils:

Chronic latent tonsilar abscesses may ini

tiate an infection developing pneumonia, pleurisy, pyæmia, or septicæmia:

That the coccus variety of germs may be temporarily encapsuled within a wall of connective tissue:

That articular rheumatism, consecutive to tonsilitis, is a suppurative process produced by invasion of cocci through lymph or blood channels:

That uric-acidæmia does not cause suppuration, but may predispose thereto.

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SCOLIOSIS.

BY L. P. ANDERSON, M. D.

Every permanent, side curvature of the vertebral column is a scoliosis, an affliction that is classified according to its initial cause: If it is an affection of the muscles, it is termed *Scoliosis muscularis;* if it depends upon a lesion of the bony structure of the spinal column, it is *S. ossicularis.* Other classifications, almost without number, have been made, but the two foregoing appear the simplest, most comprehensive, and most practical. Whether the curvature is due primarily to disease of the muscles or of the bones, either one of these may become affected secondarily if the initial lesion is not early relieved.

This is a most insidious affection, and often quite difficult to differentiate and to diagnose at its outset. As its early treatment, next to prophylaxis, is of the greatest importance, the slightest asymmetry as to shoulder blades or to the hips, should contitute sufficient reason for careful examination in order to ascertain if a deviation from the normal exists in either the dorsal or lumbar portion of the spinal column. By careful inspection and palpation, together with mensuration of the corresponding parts of the trunk, pelvis and extremities, one should be able to discover scoliosis even in its infancy.

Some authors—Jalade-Lafond, Sabatier, Buring, and Bouvier, among others,—claim that a physiological right-lateral curvature exists normally in some of the dorsal vertebræ; and the two former assert this physiological curvature is due to the pulsations of the aorta descendens, though Buring believes it is caused by the heart impulse. It has, however, been impossible to conclusively establish as a fact that such normal curvature exists, and consequently all lateral curvatures of the vertebral column must be regarded, at least for the present, as pathological.

The progress of scoliosis is very definite and from a pathological stand-point may be divided into three stages:

As soon as the lateral curve appears in any part of the column or (as is most common) in the dorsal or lumbar region, the disease is in its first stage. The characteristic signs are: The patient is temporarily able to voluntarily and independently keep the spinal column erect: It also straightens itself spontaneously when the horizontal position is assumed. The curvature is pathological, and there is no reason why this stage should be denominated a "disposition" or "tendency" to scoliosis.

The primary curvature is followed, sooner or later, by a compensation curvature, and with the development of the latter the discase has reached its second stage, an irregular S-shape; but frequently there is a further compensation curvature in the cervical and sacral regions causing the spine to assume a wave-like appearance. Characteristic of this stage, is the rotation of the vertebræ on there long axes, with the bodies thereof turned toward the convexity, and the spinous processes toward the concavity.

With the permanent curvature and rotation follows a change in the shape of both the intervertebral discs and the bodies of the vertebræ, together with a change in position of the ribs, collar-bone, and shoulder blades.—With these changes the scoliosis has entered its third stage.

The time required for the development of the deformity varies in different persons and depends, presumably, in part upon surrounding circumstances, and partly on the

qualitative condition of the cartilages and bones in the different individuals.

The pathological changes in the vertebræ and intervertebral discs, consist of a wedge-shaped compression, the base pointing toward the convexity; in some cases, the cartilages on the concave side are found entirely wanting, and there is synostosis of the vertebræ. On post-mortem, the muscles on the convex side are thin and pale, and the muscle fibres are often interposed with a considerable amount of fibro-cellular substance. They may also frequently undergo fatty degeneration and some of the fibres lose their striæ, while on the concave side, the muscles are contracted, thick, well nourished, and of normal color.

The disease presents, as a rule, definite and uniform symptoms. Of 574 cases of S-shaped scoliosis examined by Hartelius, of Stockholm, only five presented an upper curvature with the convexity towards the left and the lower curvature towards the right. This tends to show that the malady almost uniformly presents the superior curve towards the right, and the inferior towards the left.

Owing to the uniformity of the symptoms, one would naturally suppose that the causes must always present a certain amount of similarity, at least as regards their mode of action; but here, again, a great diversity of opinions obtain, due, apparently, to the fact that some consider the passive parts (bone, cartilage, and ligaments) the most important factors in the maintenance of equilibrium of the spinal column, others, the active parts (the muscles).

The supposition that very little power is needed to keep the spinal column erect, very naturally leads one to place lesions of the passive parts as the most important causative factors in this affliction, but to accord the muscles a subordinate position is, however, contrary to every-day experience. Why do the weak sink and fail, if not on account of their debilitated muscles; and why are the aged not able to hold themselves erect unless the muscular power is diminished?

That an affection of the muscles is a principal, if not the chief, factor in the large majority of cases, seems self-evident. Hyrtl* says:

> Just as long as the spinal muscles retain their physiological antagonism, just so long is a permanent lateral curvature impossible.

Heredity, in this as in many other diseases, is a prominent predisposing factor and statistics show this cause in twenty-five per cent. of all cases.—In 254 cases definitely traced to hereditary disposition, 249 had inherited the tendency from the maternal and only five from the paternal side. Yet heredity is not, *per se*, a sufficient cause of but rather a disposition to, scoliosis, because the uniformity of the curvature pre-supposes a definite causative factor.

Rachitis is essentially a disease of malnutrition and characterized by deformity chiefly of the osseous components of the skull and the long bones of the lower extremities, and it is therefore not reasonable to suppose that it is an important factor; furthermore, this malady seldom asserts itself after the sixth or seventh year, whereas scoliosis hardly ever commences until a later period in life.—Between the ages of eleven and seventeen the latter is most common.

The greater frequency of the disease among females conclusively proves that sex is a pre-disposing factor; women, according to statistics, constitute ninety per cent. of all scoliotic patients.

Swelling of the intervertebral discs and laxity of the ligaments have, by some authors, been considered a cause, but before this can be accepted it must be explained why the intervertebral discs, nearly always, swell on the right side in the dorsal-, and on the left in the lumbar-region.

That pleuritic exudate sometimes is a positive cause cannot be denied, but it is so rare that it may be considered accidental, rather than otherwise.

**Handbuch der Topograph. Anatomie*, Wien. 1872.

Stromeyer* assumes that the majority of cases are due to paralysis of certain muscles of inspiration, but the acceptance of this theory would lead us to very strange conclusions regarding the nature of paralysis in general. Compensatory scoliosis appears very seldom before the seventh year, and rarely in boys, hence if we accept Stromeyer's theory, we must also assume that, paralysis very seldom attacks the respiratory muscles before the seventh year, and that even later it much more infrequently attacks the respiratory muscles of boys than of girls,—for all of which there is not the slightest ground.

If the muscles on one side are attacked by some painful affection, rheumatism for instance, the natural tendency of the patient is to keep these as nearly passive as possible, and as the muscles on the unaffected side are thereby un-antagonized, a curvature of the spine results with the concavity on the healthy side. This, however, is a rare cause of scoliosis.

Authors describe two forms of pathological muscular contraction: Blassius† describes a pathological, permanent, but extensible contraction of the muscles of one side, as the cause of scoliosis.—Through an abnormal activity in the nervous system, a contraction of the muscles of one side takes place and thereby causes deviation in the spinal column. The other form, the pathological, inextensible contraction of the muscles on one side, is accepted by Guerin‡ as the cause. That certain forms of inflammation sometimes produce retraction or inextensible contraction, is true—torticollis, for instance, is thus often caused,—but to accept it as a universal or even general cause is contrary to both experience and any logical process of theoretical reasoning. The definite form exhibited in nearly all cases, is proof positive of the error of this assumption, because no tangible reason exists why this pathological process should always appear in the same location. Another argument against this hypothesis is: If this theory is correct, a subcutaneous section of the contracted muscles would be followed by happy results, yet, Diffenbach, who was a strong advocate of myotomy and tenotomy, declares this operation is contra-indicated in scoliosis.

Laxity and extension of the muscles of one side is an important factor in the causation and pathogenesis of scoliosis. If it is a physiological truth that equilibrium between the muscles of the two lateral halves of the trunk is essential in order to maintain the spinal column erect, then it follows as an equal pathological necessity that, when the muscles on one side are abnormally lax, while those of the other side are normal, a curvature must result with the convexity on the atonic side, and as the muscles cannot spontaneously extend, those on the concave side will remain contracted. But what is the cause of the muscular weakness on one side always?

Compensation curvature seldom appears before the sixth to the eighth year, and assumes definite form, with the upper curvature to the right and the lower to the left, in such an overwhelming number of cases that any deviation from this must be considered exceptional. These undeniable facts warrant a conclusion that a common cause or influence does exist and we must seek the solution in a practical way.

If is observed a person writing, in the usual position at a table, with the back denuded, it will be noticed that the right arm with its elbow is considerably separated from its corresponding side, and that the vertebral column is bent laterally in the dorsal region, with the convexity to the right; this is most noticeable in the weak and debilitated. This faulty position exists in schools and colleges, if not generally, at least frequently. This temporary curvature passes into a permanent one in a comparatively

*Uber-paralysis der inspirationmusk, Hanover, 1836.

†*Virchow Archives* X Jahrg., 2 Hefte, uber "Stabiliteteneuros."

‡*Rapports sur les traitments orthopedique.*

small number of individuals, because the spinal column resists for a longer or shorter period the establishment of this unnatural position; but if a pre-disposition exists, then the temporary curvature readily and quickly becomes permanent. Any position assumed often, soon becomes habitual and the muscles become dependent on and accommodate themselves to, the condition. The habitual position is in all opportunities the same, and it is readily seen how this may be a sufficient cause to produce scoliosis.

As negative proof of the theory, that a false position may give rise to permanent curvature, may be cited the fact that this deformity is absent in uncivilized people.

Predominant use of the right arm is, no doubt, an auxiliary cause of the usual typical curvature. Some authors assume that the use of the right arm more than the left develops the muscles on the dexter side of the spine more than those of the sinister, and pulls the vertebræ towards the former side. This appears reasonable enough to the casual investigator, but is contradicted by pathological facts.—If the foregoing assumption is correct, then the aim of treatment would be to strengthen the muscles on the concave side, but these, on post mortem, are found to be healthy, and even excessively developed.

The greater use of the right arm is not a direct cause of scoliosis, but its influence is therefore none the less. Look at conditions as they exist: If a weight is lifted by the right arm, the muscles on the left side must contract in order to bring the point of gravity towards the center of the base, and a temporary curve of the spine results. Here is observed an operative force similar to that seen in the faulty position and, if we stop to reflect, we will find, in every day duties, plenty of like illustrations corroborating the correctness of this reasoning.

The habit of resting on one foot may also give rise to scoliosis in those pre-disposed to this affection. Hip disease, pleuritic exudate, muscular inflammations, osteomalacia, cicatricial contractions, etc., are only accidental causes, and comparatively seldom met with.

The prognosis in the first and second stage is always favorable; but in the third stage, it must be remembered it is impossible to entirely restore the normal appearance of the spine and chest.

In treatment the aim should be to extend the contracted muscles and develop and strengthen those that are weakened. A mechanical appliance might be made to accomplish the extension, but as it cannot induce strength in the weakened muscles, it lacks the most important requisite for a cure. Another agency must, therefore, be invoked one possessing the two requisite qualities and this is found in appropriate medical gymnastics. By certain well adapted movements it is possible to extend and straighten the vertebral column, as far as can be done by any external mechanical force, hence this fulfils the first requisite, viz., *extension*. For the development of strength in a weakened or pathologically changed muscle, only three agencies are available, namely, Exercise, Massage, and Electricity. Of these, Exercise, wherever possible, is the most effectual but it may further the progress of treatment to employ all of these agents.

In simple scoliosis, active single movements are all that is necessary to correct the deformity, together with the regulation of faulty hygienic conditions.

In compensatory scoliosis should be employed passive-active and active-passive duplex movements, together with massage and electricity and, possibly, some mechanical support.

In the third stage of the disease where there is rotation and deformity of the vertebræ and ribs, a mechanical support is absolutely necessary, together with the means employed in the treatment of the second stage. Of the mechanical supports, the perforated corset is the only one which fully meets the requirements; this may be removed when the patient is treated and when

he retires at night. The braces and appliances as commonly made by orthopœdic manufacturers are generally worse than useless.

Scoliosis produced by accidental causes requires special treatment in addition to the foregoing: When lateral curvature of the spine results from inequality in length of the lower extremities, the first indication is to elevate the shoe of the short side, and thus bring the plane of the iliac crests at a right angle to the axis of the vertebral column. When scoliosis is due to superficial cicatricial contractions, these should be divided. When the primary cause is muscular inflammation resulting in subsequently inextensible contraction of the affected muscles, myotomy of the contracted muscles is indicated as a first step in the correction of the deformity.

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THE MISSING LINK.

The Theory of Evolution has undoubtedly had a greater influence upon modern thought than any other scientific theory. There has been but one thing necessary for its universal acceptance—the discovery of the "missing link." A few years ago the scientific world was startled by the announcement that this had been discovered. Ray Stannard Baker, in an article in *McClure's Magazine* for August, has given the details of this discovery, together with a concise and lucid account of the development of Darwin's masterful conception. Last year Haeckel departed for Java to engage in further investigation in this field, and the article deals largely with the life, work, and personality of this famous scientist. Among the illustrations, there is a most interesting diagram clearly illustrating Haeckel's Theory of Evolution. Here is shown the twenty-five stages through which man has descended—he has developed from a mere atom, through fish, reptiles, monkeys, into the thinking being he is.

DETROIT MEDICAL JOURNAL
A CONCISE MONTHLY
EPITOME OF PRACTICE AND THERAPEUTICS.

DR. G. ARCHIE STOCKWELL, Editor.

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Editorial.

CROWDED OUT.

Owing to the importance of the contributions appearing in our Original columns, and the amount of Editorial matter, we have been obliged to wholly omit the Department of Correspondence in this issue. Inasmuch as the latter was greatly in excess in July, it may now be fairly considered as balanced.

KOCH'S LATEST ANNOUNCEMENT.

At the recent session of the Tuberculosis Congress, in London, the Berlin scientist announced as a new, definite and personal discovery, the non-identity of bovine and human tuberculosis, adding that these are not only two distinct pathological entities, but that neither can by any possibility induce the other.

This Rip-van-Winkleish communication embraces two somewhat belated facts,—facts that have long been recognized by the foremost pathologists of Great Britain and America. A little less than twenty years ago there appeared in the "Proceedings of the London Medical Society"* the following from the well known pathologist, Doctor Heneage Gibbes:

As far as I have gone into the subject I have found a marked difference between bovine and human tubercle.

*Volume vi, page 315; December 4th., 1882.

This was further corroborated by Klein in 1883* in the declaration:

Although this question of the relation of the tubercle bacilli to tubercles may be regarded after these researches to be placed on a firm basis and worked out in its general outlines, it did not seem to me to be quite complete in the details as is generally accepted. Thus, for instance, it did not seem to me clear that human and bovine tuberculosis are exactly identical. . . . These points then were open for investigation, and a great number of experiments were undertaken under my direction by Doctor Heneage Gibbes. . . .

And again on page 185:

It appears to me justified from these experiments that the tubercular virus derived from the human subject is not the same as that derived from the tubercles of the cow, and I base this distinction on the fact the tubercle bacilli present in the human tubercles are morphologically different from those in the cow's tubercles; that although the guinea pig is susceptible in a similar degree to both the human and bovine virus, there is, nevertheless, a marked contrast between the two as regards the rabbit, for while the human virus does not as a rule induce general tuberculosis, that of the cow produces a very high degree of general tuberculosis, in which even the kidneys play a prominent part.

A year later† appeared the statement:

Among these researches, the foremost (of the year) in point of pathological importance . . . is that by Doctors Klein and Heneage Gibbes on the Mechanism of Tubercle Communication, . . . it having been proved that tubercular matter containing bacilli, and derived on the one hand from human, and on the other hand from bovine sources . . . produces in each of the creatures the identical disease with the identical differential peculiarities that would have resulted from inoculation from the same source into the same animal.

On page 172 these researches are summarized by Doctor Gibbes as follows:

It would appear then that, although guinea-pigs are affected by both bovine and by human tubercular matter, they are more susceptible to the human than to the bovine tubercle. Rabbits, on the other hand, show a very much greater susceptibility to bovine than to human tubercle: Whether fed or inoculated with human tubercular matter, the result was much the same; the lungs were the only organs affected, and there was a great scarcity of tubercular bacilli, but bovine tubercular matter always produced in them general tuberculosis with an abundance of bacilli.

Turning now to Klein's work on Micro-organisms and Disease, * confessedly the most complete and erudite work in its class at that date, on page 170 is found the definite statement:

According to my own experience, extending over a very large number of cases of human miliary tuberculosis, and tuberculosis in cattle, I can not for a moment accept the statement that the bacilli found in the two affections are identical, for I find that in the two diseases their morphological characters and distribution are very different. The bacilli of human tuberculosis are conspicuously larger than those of the tuberculosis of cattle, and in many instances more regularly granular. . . . The bacilli in the tubercular deposits of cattle are always contained in cells; the larger the cell, the more numerous the bacilli.

Looking now to Cis-Atlantic publications, it is discovered these researches, as far as one author is concerned, have been transplanted to American ground. Doctor Heneage Gibbes† affords evidence that appears wholly conclusive:

In monkeys I have never seen the kidneys affected from inoculation of human tubercular matter from any source. In inoculation experiments upon rabbits with bovine tubercular material, the results were very different. In every case a marked general tuberculosis was produced with large masses of caseation containing numerous bacilli. In connection with these animals is this: In every case inoculation with bovine tubercular material the kidneys shared the fate of other organs, and presented to the naked eye a surface studded with tubercular projections, which on examination proved to be caseous and full of bacilli.

There is still another point of difference between human and bovine tuberculosis. . . . After eighteen years in spirit the tubercular

*Thirteenth Annual Report of the Local Government Board; London, 1884, page 177.

†Fourteenth Annual Report of the Local Government Board; London, 1885, page xxxi. —Editorial Announcement by Doctor Sir George Buchanan.

*Third Edition, 1886.

†*American Journal of the Medical Sciences;* August, 1890.

bacilli in the human lung still retain their characteristic reaction. In the cow's lung, hardened in the same manner, I found that four or five years in spirit entirely removes this property and I can not get any reaction from the bacilli.

The monograph of Doctor Theobald Smith* embodying special personal researches, is in every way corroborative of the foregoing. Further† this author unreservedly asserts that though tubercular bacilli derived from a human source are incapable of retaining a permanent foothold in the bovine body, the tubercular germ derived primarily from the latter may induce, owing to its "higher pathogenic power", a general tuberculosis within the human economy; and that, therefore, "it would be reckless too a degree to relax in any respect our efforts to control tuberculosis in cattle."

Koch's intimation that either bovine tubercle, or human tubercle, when transplanted, either through ingestion or inoculation, produces its own kind only, is undoubtedly morphologically true; but then the tale is only half told. He also asserted that bovine tuberculosis has no infective power as regards the human race—a statement that will rejoice the butchers and dairy people exceedingly. Says the London Correspondent of the *Medical News*,‡ the effect of this statement upon the Congress can only be "compared to that of a dynamite explosion:"

> The airy way in which Koch asked the medical world to receive a new doctrine, erected on the flimsiest basis of fact, is a remarkable illustration of the degeneration by which he has been overtaken: It is too clear that success has turned his head, and that he cares more for "staggering" than for instructing humanity. His startling declaration that precautions against the use of tuberculous milk and meat are useless, was delivered with the calm assurance of an infallible pope promulgating a dogma which the faithful are to receive on pain of damnation. His views were severely criticised by Lord Lister. . . . Professor Nocard, who spoke afterwards, contrived, with the art of a consumate actor, to overwhelm Koch with compliments, while conveying plainly that he considered the sensational statements, not mistakes, but *deliberate lies!* Koch's views find little or no acceptance among English men of science, and they are almost universally rejected by his own countrymen.

According to the official *Berliner Correspondenz* of *The Times*, (London)* the claims advanced by Koch were already known to the German Government, which declined to accept them, and specifically announced:

> There is at present no ground for modifying the precautions which are taken to prevent the spread of tuberculosis by meats, milk and butter.

So too, Virchow, in the last issue of the *Berliner Klinische Wochenschrift*† declares he has long recognized the non-identity of human and bovine tuberculosis, a fact that was treated with contempt by the Koch school who deemed the discovery of the *Bacillus tuberculosis* proved the contrary. As to the transmissibility of either, it has been conclusively proved that:

> Infective material from human sources does not produce any symptoms in animals similar to cattle tuberculosis; also Koch has gone a little too far in excluding all those cases in which cattle tuberculosis might have been transmitted by food. Occasionally such a case has been observed in the Charité, and preparations have been collected showing unusual foci of peritoneal tuberculosis, with such enormous ramifications as are seldom found in man.

The fact is, that bovine tuberculosis is likely to exhibit greater virulence, when transplanted to man, than human tuberculosis, in evidence whereof we have the experiences of Klein and Gibbes:‡

**Journal of Experimental Medicines*, vol. iii, p. 451.

†*Ibid*, p. 498.

‡August 10th, 1901, p. 232.

**British Medical Journal*, August 10th., 1901, p. 362.

†*Ibid.*

‡Fourteenth Annual Report of the Local Government Board; Report of the Medical Officer; London, 1885, page 172.

It will be seen that the effect of feeding . . . tubercular matter differs little from that obtained by inoculation . . . though a general tuberculosis was produced, the process did not seem to be so rapid as when the tubercular matter was inoculated into the system.

* * *

The foregoing recalls another peculiar fact, viz., that the announcement by Koch of the comma bacillus as the germ of cholera was another belated "discovery(?)"

On investigation, this germ was proved, by Surgeon-Major Timothy Richards Lewis (of the British Army Medical Service, and a Professor at the Army Medical School, Netley), to be an ordinary everyday spirillum, discovered by him nearly a dozen years before, during his researches into the ætiology of cholera*, and subsequently found to be common not only to the tanks and pools of India and Egypt, but even to the ponds, lakes and waterways of Europe, and moreover rarely absent from the oral cavities of healthy beings. Furthermore the very slides from which Koch first demonstrated the comma bacillus, were furnished him by Doctor Lewis. From the pen of the latter, in *The Lancet* (London), and in his Physiological and Pathological Researches† appeared the following:

So far, therefore, the selection of the comma-shaped bacillus as the *materies morbi* of cholera appears to be entirely arbitrary. Doctor Koch and his colleagues have produced no evidence to show that it is more pernicious than any other microbe; indeed, as a matter of fact, the sole argument of any weight which has been brought forward . . . is the circumstance that it is more or less prevalent in every case of the disease, and that the German Cholera Commission had not succeeded in finding any other.

In reply to this Koch declared such view to be "untenable" inasmuch as it would have to be assumed

. . . that the alimentary canal of a person stricken with cholera must have already contained these bacteria; and seeing that they have been invariably found in a comparatively large number of cases of the disease in Egypt and India, it would be necessary to assume further that every individual must harbor them in his system. This, however, cannot be the case, . . . the comma-like bacilli are never found except in cases of cholera.

To this Doctors Lewis and Cunningham retort* if Koch and his colleagues had submitted the secretions of the mouth and fauces—the very commencement of the alimentary canal—to careful microscopical examination of the same kind as that to which they submitted the alvine discharges,

. . . we feel persuaded that such a sentence would not have been written, seeing that comma-shaped bacilli, identical in size and form, and in reaction to anilin dyes, with those found in cholera dejecta, are ordinarily present in the mouth of perfectly healthy persons.

The German *savant* subsequently admitted the foregoing as being technically correct, but while declaring his familiarity with the comma bacillus of the mouth, asserted that it differed from his cholera bacillus in "being longer, more slender and not so blunt at the ends," etc. Whereupon Doctors T. R. Lewis, Douglas Cunningham, Arthur E. Brown, Professor Ray Linkster, Sir William Aitken, Surgeon General J. M. Cunningham, and other distinguished authorities proved the identity of the organism by accurate tests and measurements applied to colonies taken, from the mouths of healthy human beings ranging from four to fifty years of age; from the alvine discharges

*Surgeon-Major Lewis and Surgeon-Major D. D. Cunningham, were engaged, by order of the British Government, upon this special service, which extended over a period of eleven years, consequently no one was in better position to speak authoritatively upon this topic; whereas Koch, when he began his investigations, was sadly handicapped by inexperience and a life-long residence in a country which—for some years at least, and certainly not during his medical career—had not suffered from an epidemic of this character.

†London, 1880.

*Physiological and Pathological Researches, London, 1880.

of cholera-affected persons; from the intestines of persons who had died of cholera; from cultivations of all three in agar-agar jelly, in weakly alkaline peptone, gelatine, etc., and by the reaction of all to staining fluids—fuchsin, gentian-violet, methylen-blue, etc.

Towards the close of 1884 the India Council established a Commission to report on the claims of Koch: this was composed of Doctor Heneage Gibbes, of London, and Doctor Douglas Cunningham, of Calcutta; subsequently, by request of the Royal Society, Doctor Klein was added. The investigations, made on Indian soil, were everyway corroborative of the negative character of Koch's comma bacillus. Fifty-four autopsies, made immediately after death from cholera, demonstrated the presence of this bacillus in *only three* instances! and it may here be remarked Koch's post-mortems were never made until at least twenty-four hours had elapsed, which in a climate like that of India would permit of the development of myriads of any one species from the accidental presence of a single germ. The self same tank, moreover, that played such an important part in Koch's report, was visited by the Commission on November 26th, and which furnished the sole water supply of some 200 natives. Here comma bacilli identical with those found in choleraic dejecta overwhelmingly obtained; and yet, notwithstanding a single case of cholera occured in this community, and the extended use of the water, not another person contracted the disease. Another tank, even richer in bacilli than this, failed to develop during an entire year a single case among the people that were supplied with its polluted waters.*

On return to London a report was submitted to a Committee appointed by the Indian Government, and it may be of interest to know that it received the endorsement of all the members, viz.: Sir William Gull, Doctor Marston and Doctor Norman Chevers.

Further, during a subsequent and independent investigation D. D. Cunningham found fourteen different kinds of comma bacilli in the dejections of sixteen consecutive cholera patients, that of Koch "being very far from the most numerous of the lot." Lewis, too, found the Koch bacillus most abundant in the drinking waters of India during the seasons when there was absolute freedom from cholera; and M. Neller* observed the bacillus of the Hamburg cholera epidemic to differ markedly from that claimed by Koch to have been discovered in Egypt and Hindustan, "in that it is thicker, shorter and larger than the latter, causes turbidity of bouillon, and in peptonized gelatine grows more rapidly"; it was found in twenty-nine cases of cholera (also in the sputum of bronchopneumonia), and in thirty additional cholera cases it was wholly absent.

Further, Koch declared† that "comma bacilli extraordinarily easy die when they are dried"; and "for the spread of the infective material the main condition is that the dejection should remain in a moist state, for as soon as they dry up they lose their activity." Laboratory experiments and experience also have demonstrated these bacilli are among the most sensitive and non-resistant of organisms of their class. Again, Mariano Semmola, admittedly one of the most earnest and profound pathologists of the Nineteenth Century, referring to the comma bacillus, and Koch's published experiments, remarked he could not comprehend "how true clinicians can accept as of practical value results that are established solely in the laboratory."

*An Inquiry into the Etiology of Asiatic Cholera, London 1885. Published by the Secretary of State for India.

**Le Progres Medicale*, 1892.

†Report of July, 1884.

That Koch's claims were, and are, accepted without due caution, is perhaps due to the fact that Americans are only too prone to receive as fact any loose statement that emanates from German sources. Only in May last, before the Michigan State Medical Society, the author of the "Annual Oration" fell into this error when he declared that cholera is "a malady now, fortunately, by the efforts of science, robbed of its terrors."

Pettenkofer conclusively proved the non-identity of the artificial flux set up by the comma bacillus with that of cholera; and it is now, moreover, generally recognized that the "Eastern scourge" is not the result of pathological changes induced within the digestive tract, but due to a subtle poison affecting the nerve centres*, manifesting itself chiefly through the solar plexus; that it may rise from development and absorption of ptomaines perhaps, but more often, especially in epidemics, has a psychic origin.

* * *

Passing strange is the egoism manifested by the majority of those scientists of Germany who pose, on this side of the Atlantic at least, as "authority." Without any desire to appear captious or to "ape the carping critic" we can not but remark the haughty indifference and arrogant assumption displayed towards all literature and scientific investigations that do not originate in the "Fatherland." It is this peculiarity that gave rise to the following caustic remark of a French scientist, in a communication to the editor of this Journal, when about to visit Berlin:

I am going to Germany—where they know so much and accomplish so little.

This calm assumption of superiority and supremacy, entirely out of proportion to the results obtained, strange to say has been generally acquiesced in, so far as the United States is concerned, which country by the servility of the profession at large has thus become the most fruitful source of income to *Deutsch* charlatanry. Therapeutic products are unloaded in the Western Hemisphere of such low and inferior qualities and grades they are not permitted to be offered for sale at home. Again there is no such thing as reciprocity in medicine or medical education between Germany and the United States; American practitioners who do not pose as students are not even tolerated or courteously received in most quarters; only his *geit* renders each *persona grata.* There are no civilized countries on the face of the globe wherein pathology has so little bearing upon the action of remedies, or where therapeutics is deemed a branch of medical science utterly unworthy of serious attention and consideration (excepting perhaps to aid in foisting trademarked and patented nostrums upon obsequeous American imitators and followers) as those embraced in the German Empire. No wonder *Farbenfabriken* flourish and usurp the role of manufacturing pharmacy,* or that the erudite discoverer of "tuberculin," when ill, placed himself under the ministrations of a charlatan cleric like Pastor Kneipp.

†*Vide* Flagge (Principles and Practice of Medicine, London, 1891) and others.

EDITORIAL NOTES.

Medical M. P's.—

The Canadians seem to think highly of their physicians, eighteen of whom are members of the present parliament.

Anent Noses.—

People who hold that there is an occult connection between the shape of the nose and mental characteristics will find much to confirm their opinion in the study of "Minds and Noses," which *The Living Age* for August 10th reprints from *Blackwood's Magazine.*

*We shall exploit this topic in a future issue.

Tuberculosis in Russia.—

Rubel recently stated, at a meeting of the Society of Hospital Physicians, that 37,000 persons (approximately twenty-five per cent. of the population) die yearly of tuberculosis in St. Petersburg.

The Deadly Quick Lunch.—

The Chicago Medical Society recently discussed the ætiology and prevention of gastric ulcer, when Doctor Andrews declared this affection resulted largely from abuse of the digestive organs, and particularly the pernicious habit of bolting lunches without proper mastication. He remarked that statistics show that gastric ulcer has increased about two hundred per cent. within the few short years of its medical history.

This should serve as a warning, not alone to medical men, but also to other busy men, who indulge in the quick-lunch habit.

A Needed Reform.—

Doctor Elmer Lee, in the *Municipal Journal and Engineer*, suggests a new method of street lighting which shall combine the names and numbers of the thoroughfares while giving space for the attachment of mail, fire and police boxes, with a drinking fountain appurtenance added. The plan is certainly practical, and carried out would prove a useful adjunct to the comfort of the public at large.

Camphor, New Source of.—

Recently the discovery is claimed that camphor (which hitherto has been regarded as a purely vegetable or synthetic product) can be produced by means of a diplopod (*Bolzonium rosalbium*) found in Northern New York and existent perhaps in other parts of America. It has been ascertained that the substance which gives the odor of camphor is a milky fluid exuded from the dorsal pores, and that this not only smells but tastes like the gum. The study of the "camphor worm," which forms the subject of a paper in a recent issue of *Science*, presents many interesting chemic and biologic problems.

Anæmic Vertigo.—

Burnett declares the rare form of vertigo which arises from local anæmia of the labyrinth, may be diagnosed by the presence of tinnitus and dull hearing and by the fact that the symptom is suppressed temporarily by the inhaling of a few minims of amyl nitrite after eating.

Photo-Therapy.—

Doctor Neils Finsen, of Copenhagen, is the originator of a system of photo-therapy that bears his name. This embraces the application of sun-light to the treatment of diseases of the skin—lupus, ulcers and many other affections—which he believes can be rendered more effective than through the Roëntgen rays.

Chloroform, Use of.—

The use of chloroform in England is said to be becoming less frequent than heretofore, ether having taken its place. Americans say this is because English physicians do not know how to use the drug properly.

The Obstetric Binder.—

Jewett believes a firm binder is frequently of material service in the second stage of slow labor, especially in relaxed condition of the abdominal wall, by furnishing a *point d'appui* for the intra-abdominal pressure.

Prehensile Foot of the Prostitute.—

In an old number of the *Monatshefte für Praktische Dermatologie* appears a study of the morphology of prostitutes, by Jullien, who examined fifty young women with reference to the presence of the *pes præhensilis* of Italian observers.—In this malformation there is an abnormally wide space between the great toe and the second digit. In two-thirds of the prostitutes examined the average distance between the two toes was more than an inch, and the deformity was more common on the left side.

Items and News.

Antitoxin Serum.—

The manufacture of antitoxin serum, closely examined, reveals some surprising things. In a man natural immunity is established by a process in which the bacteria take some part, while the so-called antitoxin horse-serum used for immunization of man is elaborated in the animal by some phenomena in which the microbes take no part; for the toxin injected into horses is first freed from bacteria: This is already a different thing. When to this fact is added the likewise very important consideration that the horses are tested with tuberculin, injected with tetanus antitoxin, and further inoculated with the mallein of glanders, the confusion becomes worse confounded, for surely these substances must produce some constitutional changes in the animals which are transmitted to the serum. But this is not all! Not until, to some preparations of antitoxin, an antiseptic has been added is the serum considered finished and ready for use.

When we know that many cases of diphtheria are complicated with other throat affections against which the Klebs-Loëffler antitoxin serum has no effect, and the unestablished grounds on which the whole theory rests, it should no longer seem strange that to-day many men will not use antitoxin, but rather surprise should be evinced that there still remain some one who persists in using it on the insufficient evidence brought forward in its favor.—*Medical Record.*

Wych Hazel.—

The correct name for *Hamamelis virginica* is not witch hazel, but wych hazel, a plant that has no connection with the magic of the water hunter. The black thorn of England, *Prunus spinosa,* was the wood used in these divinations or whatever such superstitious practices may be termed. Hazel had a very wide meaning in the olden times, and the elm, as well as the nut now known as such, was hazel. One of these elms, *Ulmus montana,* was the favorite wood for making *wyches* or provision chests, and was, therefore, known as the wych hazel; to-day it is known as wych elm. Hamamelis received from the early settlers the name of wych hazel from the resemblance of the leaves to those of the wych hazel or elm of the Old World. Language reformers, imagining that wych should be spelled witch, are responsible for the confusion. Wych hazel is the correct term for our plant.—*Meehan's Monthly.*

Mississippi Valley Medical Association.—

The date of meeting of this body has been changed from September 10-12th to September 13-14th, and will be held at the Hotel Victory, Put-in-Bay Island, Lake Erie. The Secretary is Doctor Henry E. Tuley, 111 West Kentucky Street, Louisville, Ky.

Sale of Spirits in Russia.—

It is now five years since the Government assumed exclusive control of the manufacture and sale of alcoholic liquors. In nearly all the provinces of Russia the saloon has been supplanted by Government shops, in which a guaranteed pure article is sold in a limited quantity to each customer; none is sold to those already intoxicated. These shops are located quite a distance apart and no one is allowed to drink liquor on the premises where sold. The system is supplemented by officially appointed local committees in each large town, which are supplied with funds to establish attractive temperance restaurants, reading-rooms, etc. A portion of the enormous profits of the liquor monopoly is devoted to this purpose.—*North Carolina Medical Journal.*

A Novelty; "Scorpion Oil."—

In the lower land and towns of Switzerland, scorpion oil can be obtained at any chemist's, and these buy their scorpions direct from Italy. Every year Italian scorpion-sellers traverse Switzerland, especially the mountain valleys thereof. It is usual to take, say, a half litre of good olive or walnut oil, and throw therein about ten living scorpions, which are left until they die—say twelve or twenty-four hours; they are then taken out, or the oil poured off.

In the case of poisonous snake-bites, or poisonous *"Insektenstichen,"* the wound is first, if possible, washed out with salt water: The scorpion oil is then rubbed in, and all round over the swollen part, the rubbing being towards the wound.

In the case of other *"Giechtigen, Schnitten, Stichen, Quetschungen, giechtigen Geschwülste und dergleichen,"* the oil is ap-

plied in like manner, only it is not poured into the wound, as it is too *"scharpf."*

The custom is centuries old. In general the application is external only; but there are those who, when suffering from great internal pain of which they do not know the cause, drink some drops of the oil in chamomile tea.—LARDEN (*Nature.*)

Montan Wax.—

Montan wax is one of the distillation products of lignite with a formula C^{29} H^{58} O^2, and resembles paraffin, but is more easily saponified; it is essentially, a fatty acid of an exceptionally high order, and called "Cerotonic acid."—VON BOYEN (*Scientific American.*)

Sonorousness of Aluminum.

An excellent property of aluminum is its sonorousness. The sound of an aluminum bar is not limited to a single tone, with its corresponding upper tones, but there are two different tones audible, one in the longitudinal and one in the transverse direction. This may be easily observed by hanging a bar on a thread and holding it near the ear while striking it.—*Electricity.*

Tiliadin.—

Braëutigam has isolated from the bark of the linden tree a crystalline substance having the empiric formula $C^{21}H^{32}O^2$, and melting at 442.40°. This "Tiliadin," is quite resistent to ordinary oxydizers. The investigations so far made show that it is neither a glucoside nor a cholesterine; it has not been definitely decided, so far, however, to what class of organic compounds it belongs. The author also reports having observed vanillin in linden bark.

Vegetarianism.—

In order to be better enabled to live up to their tenets and to avoid the sight of human brutes who will slaughter helpless animals that they may indulge their taste for meat, sincere adherents of the vegetarian cult are desirous of establishing a colony far away from the wicked children of the world. To that end the president of the Vegetarian Society of America now is spending his time in the South looking for a suitable locality for such an enterprise. These no-egg, no-milk vegetarians want to flock by themselves where all sorts of fruits and nuts can be grown and where the colonists may engage in vegetable farming, the manufacture of peanut butter, and fruit canning. —*Western Druggist.*

Late Union of Fractures.—

Fractures of the upper third of the humerus are more apt to be complicated by delayed union than those of any other portion of the economy.—*Medical Summary.*

A New Alloy.—

An alloy of magnesium and aluminum, to which the name of "magnalium" has been given, is attracting some attention on account of its combination of lightness and hardness, together with other useful qualities.—*Mining and Metallurgical Journal.*

Bacteria and Cold.—

A large variety, including the germs of typhoid fever, diphtheria, anthrax, and other pathogenic and ordinary bacilli, have been found to endure the cold of liquid air and liquid hydrogen without injury. There was no alteration, either in the appearance or growth of the bacteria, after a ten-hour exposure to this intense cold, the examination being made both microscopically and by culture. The typhoid bacillus has been known in many instances to be transmitted through ice, frozen at a temperature below zero, from the typhoid excretions thrown upon it. A not very high degree of heat, however, is sufficient to destroy their life. —*Medical Times.*

King Edward as a Medical Man.—

The King has honored the Royal Medical and Chirurgical Society by signing its roll. His Majesty is already a Fellow of both the College of Physicians and the College of Surgeons, so that he may be claimed as a "doubly qualified" member of the medical profession. By the way, people are noticing more and more his strong resemblance in face to Henry VIII, and a further coincidence is, that "Bluff King Hal" was, according to Froude, one of the best physicians of his day and the founder of the Royal College of Physicians of London, of which his descendant (for the Royal Family lays great store on its supposed possession of an infinitesimal portion of the blood of the older Kings of England) is now an ornament.—*Medical News.*

Book Reviews.

A Systematic Treatise on Materia Medica and Therapeutics. By Finley Ellingwood, M. D., Cloth 8 vo.; pp. 706; Price, $5.00. Chicago Medical Press Co., Chicago, 1900.

We have delayed noticing this volume. which has been in our hands for some months, in order to give it very thorough examination, with the result that we esteem it one of the most valuable works on Therapeutics that has been issued in the United States during the last quarter of a century.

One notable feature is the classification of remedies adopted, based upon physiological and therapeutic action, and which renders each available for ready reference. Thus the author divides his remedies into ten groups, which include agents acting upon the Nervous System; the Heart; Respiratory Tract; the Stomach; Intestinal Glandular Organs and Intestinal Canal; the Blood; the Genito-Urinary Organs; Female Reproductive Organs; Micro-Organisms and Parasites, and finally; the Hæmostatics. This would appear not only practical but to obviate those defects which generally obtain to works on therapeutics.

A striking feature of the volume is the direct action of each remedy as applicable to distinct conditions of disease, which will certainly be most gratifying and satisfactory to the busy practitioner, or him who is just entering upon the profession. The diseases are all printed in black face type, thus reference research is facilitated.

While we may not agree unreservedly with Doctor Ellingwood regarding the action of some remedies, we nevertheless recognize the extreme value of this book, a value that obtains to no other edition devoted to modern therapeutics.

Another thing that adds to its practical utility is a consideration of pharmacy and pharmcognosy by Professor John Uri Lloyd, Ph. D., whose name alone is sufficient guarantee of the character of the work undertaken.

The Youth's Companion in 1901.

The ends of the earth have been laid under tribute for the 1901 volume of The Youth's Companion. Statesmen, Diplomats, Travelers, Trappers, Indian Fighters, Cow-Punchers and Self-Made Men and Women of many vocations are contributing every week to the entertainment of young and old in Companion homes. Among them are Theodore Roosevelt, who has written an article upon "The Essence of Heroism." The Secretary of the Treasury has endeavored to answer the question, "What is Money?" Frank T. Bullen, the old sailor who spins fascinating yarns of life at sea, has contributed a story. W. D. Howells has describe the relations between "Young Contributors an Editors." Paul Leicester Ford has writte about "The Man of the Dictionary"—Noah Wel ster. There is not space here to begin to te of the good things already provided for reader of the new volume of The Youth's Companion- interesting, instructive, inspiring—from th pens of famous men and women. Illustrate Announcement of the current volume and san ple copies of the paper sent free to any ad dress.

New Instruments and Devices

A new electrical device has been perfected b Doctor Tracy, of New York, which magnifie sound five times. It consists of the essentia parts of an ordinary telephone, with a storag battery of four volts. The transmitter is fitte with a delicately adjusted microphone, consis ing of a diaphragm and a small cup of carbo granules, each of a pin's head in size. Th microphone magnifies the sound, as does th battery itself. There is also utilized an indu tion coil, such as is used by Doctor Pupin i his ocean telephone. By this device, it i claimed, ordinary conversation is made audibl to those whose ears are deaf even to shoutin

* * *

We present herewith a cut of a double cu rent syphon needle spray devised by Docto

Frank B. Walker, of Detroit, and intended mor particularly for the treatment of diseases o the stomach.

This device is presumed to obviate many o the difficulties that beset the operation know as lavage. By the employment of fluid in spra form it is believed to be possible to reach th entire mucous lining of the stomach. The forc of the spray can be regulated by raising o lowering the reservoir to which the smalle portion of the bifurcated tube is attached. Th fluid contents are returned through the large tube.

This is made of the very best American com position (antimony cured) rubber, and is o mauve hue.

Therapeutic Brevities.

Chian Turpentine as a Hæmostatic.—This drug has been successfully used for arresting hæmorrhage in cases of cancer of the breast and uterus, and a fair trial will be convincing of its utility in nearly every form of internal hæmorrhage. In hæmoptysis give ten grains at once and five grains thrice daily, thereafter—it is probable the hæmorrhage will be effectually repressed during the first six hours, even if it has persisted for three and four days. In a case of severe post-partum hæmorrhage, two ten grain doses were sufficient, and there was no recurrence. For an old lady with cancer of the cervix, which bled profusely about once a month for nearly a year, ten grains were ordered thrice daily for a week, then five grains four times a day for t next week, and lastly five grains twice daily till the end of a month, and for seven months there was not the slightest sign of hæmorrhage. So, too, ten grains were given successfully every four hours to a patient suffering from hæmoptysis due to a liver abscess bursting into the right lung. Here ergot hypodermatically had failed.

To an old Mohamedan woman, suffering with sloughing cancer of the breast, ten grains thrice daily, caused both the hæmorrhage and pain to disappear, though the bleeding came on again after some days; nevertheless, the drug continued to prove effective on every occasion when employed, and contributed not a little to her comfort throughout the balance of her days. It is the only agent that will successfully control the epistaxis of "bleeders."

The turpentine, moreover, in painful cancers, uterine and mammary, is found to act as an anodyne, the patients themselves ascribing their relief to it.

The drug ought to be given a fair trial as a hæmostatic and an anodyne as it will relieve, temporarily, the sufferings and anxiety of many an unhappy patient, if nothing more.—JAMES, (*Indian Medical Record.*)

Dangers of Hair Dye.—A case of acute dermatitis was found to originate in the use of hair-dye, the base of which was hydrochlorate of paraphenylene-diamine. The eruption covered the forehead, which was red and shiny, with a few vesicles near the margin of the hair, the eye-lids, the ears, the nose, and cheek, and the flexor and extensor surfaces of the forearms. The anterior and inner sides of the thighs were covered with numerous small slightly elevated papules and a few vesicles. The patient complained of a prickling sensation and an uncomfortable tension of the face.—CATHELINEAU (*Bulletin Commercial.*)

The Camphor-Eater.—It is surprising what a number of camphor-eaters there are amongst the well-to-do classes. The idea seems to prevail that this gum, taken in small and regular doses, gives a peculiarly clear creaminess of complexion, and scores of young women buy it for this purpose. The habit is, moreover, very difficult to cast off, for camphor produces a mild form of exhilaration and stupefaction; and in many instances where very large doses have been swallowed, the habit has become a sort of slavery. These camphor-eaters all have a dreamy, dazed and very listless air, and in most of them there is an ever-present longing to sleep, or, at least, to rest. Extreme weakness generally follows the taking of regular doses; and I have seen cases where it has been almost difficult to tell the effects from those of alcohol. As to the complexion—if a ghastly pallor be an improvement, camphor certainly produces it.—*The Clinic.*

Formic Acid as a Preservative.—This acid is not used to any great extent as a preservative. However, the addition of three fluid drachms of formic acid, specific gravity 1.060, to a gallon of *syrup* made with six pounds of best cut-loaf sugar and two quarts of distilled water, preserved the product in perfect condition for more than a year; and the author consulted a number of physicians as to possible injuriousness, when all agreed that the above mentioned proportion would be innocuous.—MERCK'S REPORT.

Reduced Iron.—Iron by Hydrogen is a very fine grayish-black lusterless powder.

On page 634 of the U. S. Dispensatory occurs the following: "If black the preparation is to be rejected as not being fully deoxydized. . . . In the process of making Reduced Iron, part of the sesquioxyde almost always escapes full deoxydization and comes out of the tube a black color, which should be rejected."—*Pharmaceutical Notes.*

Hands, Asepsis of.—A piece of pumice stone, boiled and kept in an antiseptic, is most effective to render the surgeon's hands aseptic, and "give him a new skin:" It is far superior to the nail brush. Tests on dogs and rabbits whose intestines and peritoneum were handled after the hands had been rubbed with pumice stone in soapy water demonstrated the absence of pathogenic germs.—MERIEL (*Journal de Médicine de Paris.*)

* * *

The majority of surgeons use hard sodium soaps but the potassium soaps are to be preferred because they are less expensive, easily soluble in water, and because clinical experience has shown that the cleansing quality of the latter is greater. —LEVSCHINE.

* * *

No method of disinfection will to a certainty render the hand that harbors septic germs aseptic. It is therefore advised to use rubber gloves in addition to thorough disinfection, the avoidance of contamination with septic material as far as possible, and the employment of rubber finger cots for examination of septic cases. Further, scrupulous care of the hands including the avoidance of aig-nails, keeping the fingernails clean, and the skin of the hand smooth and unbroken, is demanded. Seborrhœa of the scalp, ozœna and carious teeth must also be avoided by the surgeon.—HAMMERSFOHR (*Centralblatt fur Chirurgie.*)

Sterility and Belladonna.—There are few drugs that exhibit so pronounced predeliction for certain structures of the body as belladonna, and among the favorite tissues are those of the female sexual organs. Every practitioner is occasionally consulted by married women as to the cause of barreness, though they enjoy the best of health, and have never suffered from any irregularities of the sexual apparatus. To such, on many occasions, belladonna internally becomes a boon, and after some weeks they become pregnant. This happens so often that I am constrained to regard it as something more than accidental. I do not venture to theorize upon the action of the drug in these cases, but may mention the fact that I have observed the external genitalia become more relaxed, and the uterine neck and os somewhat softened and pliable. —JONES (*New York Medical Journal.*)

Chrome Eyeglasses.—Yellow, or yellowish-green glasses, may be employed to advantage in the following:

In all cases in which the eyes require to be protected from an excess of violet or ultra-violet rays, as when working under strong electric light—here preference must be given to yellowish-green glasses:

Whenever the eye lacks the natural protecting elements, *e. g.* in aphakia, in which, according to Widmark, the absence of crystalline lens deprives the eye of the protection from an excess of violet rays, especially if the patient, for any reason, is suffering from weak eyesight.

An important property of these glasses is they facilitate distant vision, a fact which has already been recognized by the German Army Medical authorities.—DOLGANOFF (*Vratch.*)

Whooping Cough.—

Bromoform	64 minims
Sweet almond oil	5 drachms
Gum tragacanth	30 minims
Gum Arabic	60 minims
Cherry-laurel water	60 minims
Distilled water to make	4 ounces.

A teaspoonful contains two drops of bromoform. Children under six months are given two or three drops daily to begin with; from six months to one year, three to four drops—divided in three doses.

—*Pediatrics.*

* * *

This malady, for fifteen years has been successfully treated by Josset with the aid of hyposulphurous baths, seventy-five centigrammes of polysulphate of potassium per litre being employed. The temperature should be 97° Fhr., and the duration twenty-five to forty-five minutes, according to age. Fifteen baths are, at most, required. —*La Médicine Moderne.*

Varicose Veins.—One hundred and sixty-four cases of varices without a single failure have been treated by means of hypodermatic injections, eight drops at a dose, into one of the principal varicose confluents, of a solution containing iodine and tannin, one and nine parts respectively; the operation is performed without anæsthesia, and repeated when necessary, the patient mean-

time standing, a rubber tube having been placed at the root of the thigh. By this operation a hypertrophic phlebitis may be brought on, with thickening of the venous walls, and consequent resistance to dilatation. After operation the veins are compressed ten centimeters above and below the puncture, the limb wrapped in boric-acid cotton, and the patient kept rigorously on his back in bed. The possibility of embolism is purely theoretical and not borne out by facts.—*Nice-Médical.*

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Pulsatilla is often of benefit in the treatment of varicosities, inasmuch as it acts upon the vascular system, and above all relaxes the right side of the heart, the veins and the capillaries. Wych hazel much resembles pulsatilla in this respect, and sometimes is even more beneficial; it causes dilatation of the blood-vessels with blood stasis and sequences.—*Allgemeine Homœopathische Zeitung.*

Acne.—

Mercury protoiodide....10 grains
Mercury ammoniated....20 grains
Simple Cerate..... 1 ounce

Apply with friction.

—DUHRING.

* * *

Liquor potassa..... 1 drachm
Rose water..... 4 ounces

Apply with a soft sponge twice daily.

—BARTHOLOW.

* * *

Nitro-muriatic acid,
dilute .....180 minims
Simple syrup..... 3 ounces
Orange-flower water to
make ..... 8 ounces

A dessertspoonful thrice daily.

—DA COSTA.

Nasal Catarrh, Spray for.—

Sodium bicarbonate..... 3 grains
Sodium biborate..... 3 grains
Distilled water..... 1 ounce

Filter and use as wash or spray.

—SAJOUS.

Anæsthesia.—In combinations of anæsthetics the patient is subjected to the bad effects of all. These admixtures, therefore, possess no advantages, since all the bad effects are exerted upon the heart or kidneys.—KEMP.

Hiccough.—A young girl suffered for four days without cessation from singultus, about thirty spasms to the minute, the attack being due, apparently, to some gastric disorder. When she put out her tongue for a few seconds it was found the hiccough ceased. She was then ordered to stick out this member at regular intervals for a few minutes, at the termination of which only a few slight spasms followed. She was then ordered to repeat, when the singultus ceased altogether, and did not again return. It therefore would seem to be proper to try continuous or rhythmic traction of the tongue in these cases.—*Revue de Thérapeutique.*

Cough Mixture.—

Potassium citrate.....1 drachm
Lemon juice..... 2 drachms
Ipecac, syrup..... 4 drachms
Simple syrup to make..4 ounces

A tablespoonful four to six times daily.

—WOOD.

Hair, Falling of.—

Cinchona, (red) tinct... 2 ounces
Cantharides, tinct..... 1 drachm
Ignatia, tinct.....15 minims
Acid carbolic..... 1 drachm
Cologne water..... 3 ounces
Cocoanut oil..... 3 ounces

Apply to scalp twice daily, morning and night.

—*Extraits du Formulaire de Vienne.*

An Efficient Sterilizer.—Ammonium sulphate solution is effective in sterilizing silk catheters as well as cat-gut ligatures.—*Medical World.*

Blisters.—There have been many protests against Huchard's sweeping denunciation of blisters. Matthieu asserts that in hydrarthrosis a cantharides blister is invaluable; and he likewise employs for the relief of gastralgia, on a space the size of a five-franc piece. Adrian thinks if the substance be applied in the form of chloroform solution, with a little squill, no bad results will follow, such as may be attributed to the use of plasters that leave some of the irritant on the skin. All agree, however, that the blister is worse than useless in broncho-pneumonia, kidney and cardiac troubles, and for children and elderly persons.—*Medical Bulletin.*

Barium Hydrate a Test for Organic Matter.—When barium hydrate is added to a mineral water, it precipitates all the contained metallic oxydes. This enables a series of organic substances to be detected:

Acids forming insoluble barium salts, perceived by the blackening of the barium precipitate on calcination:

The substances which barium hydrate leaves or sets free in the water, such as fatty materials and substances behaving as alkaloids, and that can be extracted from the water by means of benzene, petroleum ether and chloroform:

An acid which is apparently freed from its compounds by sulphuric acid:

Substances which precipitate silver nitrate, in the same manner as the three halogens:

Finally, a neutral substance which remains in the last portions of the primitive liquid with the alkaline earths and the alkalies.—GARRIGOU (*Chemical News.*)

Sage in Hyperidrosis.—Infusion of sage is again recommended for the treatment of hyperidrosis in tuberculous subjects as well as those suffering from leukæmia, rheumatic polyarthritis and typhoid fever; in thirty-eight cases where it was tried there were only two failures. Steep forty-five grains of sage leaves in half a pint of water and let the patient take a cupful in the morning, one during the course of the day, and still another before retiring at night —or the tincture of the leaves may be given in twenty-drop doses in the morning, and from twenty to forty drops at night. *Salvia officinalis* has a proper place in the front ranks of anti-sudorific remedies.—*Medical Week.*

Turpentine for Microscopy.—To rectify oil of turpentine so as to render it suitable for microscopical purposes, it is only necessary to place four parts thereof in one part of ninety-four per cent. alcohol, agitate well (from three to five minutes, according to the quantity employed), then set aside until it separates into two layers, of which the alcohol is the upper. Now decant off the spirit and add the residue to four parts of distilled water with persistent agitation; then set aside to separate as before. This time the turpentine will form the upper layer, which decant, adding thereto about an ounce of powdered starch, also with agitation, when the product may be filtered through paper. Keep in a glass-stoppered container.—*National Druggist.*

Novel Remedy for Neuralgia.—Naegeli announces he has frequently caused almost immediate cessation of cephalalgia and facial neuralgia, as well as forms of long continued odontalgia, by simply elevating the hyoid, or what amounts to the same, the larynx, holding it well upward for sixty or seventy seconds. This frequently requires to be repeated several times, but quite as frequently one single attempt will prove successful. We have had several opportunities to test the truth of this, and in every instance in which the plan was followed, relief was almost instantaneous. The fact deserves to be more widely known than it seems to be.—*Public Health Journal.*

Meniere's Disease and Pilocarpine.—A man aged twenty-nine, afflicted with otorrhœa and symptoms of tuberculosis, suddenly started to vomit, then became deaf with vertical vertigo, but did not loose consciousness. The vertigo persisted for several days, and the murmur in the ears became very intense; there was anchylosis of the ossicles. He was ordered one-fifteenth of a grain of pilocarpine hypodermatically the first day, reduced to one-sixtieth the second day. After ten days the vertigo disappeared, but returned, when treatment was recommenced and continued for thirty days, when all disagreeable symptoms had permanently disappeared.—*Annales des Maladies de l' Oreille.*

New Alkaloid and Glucoside.—One of the Cruciferæ, *Erysimum aureum,* an ornamental garden plant, contain two active principles—one of an alkaloidal nature which provokes paralysis, and the other a glucoside, which constitutes a violent poison, affecting the heart.—SCHLAGDENHAUFFEN (*Chemical News.*)

Quinine, to Disguise the Taste of.—Make a syrup of rose leaves (fluid extract "hundred-leafed rose") one part; simple syrup three parts. This entirely masks the taste of the drug, the bitter flavor of the rose leaves only being noticeable; but immediately water is added the quinine is brought again in evidence.—GATES.

Nymphomania.—Search carefully for local cause, such as vaginitis, vegetations, vulvitis, eczema, syphilis, herpes.—Investigate especially as to diabetes.

Where a nervous disorder is suspected, bromides in medium doses are beneficial, and when associated with opium combat effectively the exaltation of venereal appetite: Camphor may be added if necessary.

When insomnia co-exists chloral may be given at night.

Local applications are useful, cocaine in lotion having the preference. Hydrotherapy is indicated in all cases; cold applications to the spine are beneficial, especially if made at bed time.—LUTAUD.

Bone Black Versus Iodoform.—Iodoform stimulates granulation by its fibroplastic influence, and this is probably an attribute of any finely distributed, inert foreign substance. I have been extensively testing bone black from this point of view, and in twenty-two cases of local tuberculosis miscroscopic sections of tissue showed that this substance is fully equal to iodoform without any possibility of intoxication. Only as a deodorant is iodoform its superior.—FRAENKEL (*Weiner Klinische Wochenschrift.*)

Tonic for Asthenic Fevers.—

Quinine sulphate..... 16 grains
Acid muriatic, dil.....120 minims
Iron muriate tinct....120 minims
Nux Vomica, tinct.... 80 minims
Ginger syrup to make. 2 ounces

A desertspoonful three times daily.

—BARTHOLOW.

Bronchitis, Acute.—

Terebene ..... 4 drachms
Morphine sulphate.... 1 grain
Acacia mucilage..... 4 ounces
Tolu syrup..... 2 ounces

A teaspoonful every third hour.

—DA COSTA.

Collinsonin.—This is a resinous substance, resembling scammony, obtained from the rhizome of *Collinsonia canadensis* (*C. ovalis*), by percolating with alcohol of specific gravity 0.828 and drying the residue, after distilling off the spirit. It is said to be of service in hæmorrhoids and other diseases of the rectum, as well as in headache, digestive disturbances, phthisis, and heart failure.—OUGH (*Apotheke Zeitung.*

Gall-Stone Colic.—A blacksmith suffered from attacks of biliary colic during two years and became so much reduced in strength that he was obliged to give up all work, and keep to his room. Ipecac was prescribed in small doses and he only had one attack subsequently.

Another case successfully treated in like manner, after the lapse of a year had no recurrence. So far as personal experiences go, ipecac always works promptly and leaves no unpleasant after-effects.—Correspondence *Homœopathic News.*

Psoriasis.—

Chrysarobin .....20 grains
Simple Cerate..... 1 ounce

Apply three times daily with thorough friction.

—GROSS.

Sciatica.—The following formula for the relief of sciatica, acute or sub-acute, is the most effective I ever prescribed:

Opium powd.....12 grains
Ipecac powd.....12 grains
Sodium salicylate.....90 grains
Cascara, extract fluid, q. s.

Make twelve pills and give one or two at a dose.

These induce activity of the skin, relieve pain, and keep the pulse free.—BENJAMIN WARD RICHARDSON (*The Asclepiad.*)

* * *

Wintergreen oil, true.. 4 drachms
Turpentine oil, rectified 4 drachms
Acacia syrup..... 2 ounces
Cinnamon water..... 1 ounce

Make emulsion. Give a teaspoonful three or four times daily.

—DANA.

Diarrhœa, Obstinate.—

Silver nitrate.....1 to 2 grains
Powd. gum Arabic.....160 grains
White sugar..... 1 ounce
Water, distilled..... 8 ounces

A teaspoonful every two or three hours.

—CONSTATT.

Cough Pills.—

Terpineol .....187 grains
Sodium benzoate.....187 grains
Milk sugar, sufficient to make mass.

Divide into 100 pills, and administer one or two every second hour.

—*Pharmaceutical Era.*

Medical Progress.

Truss-Fitting.—

I take it for granted that the diagnosis has been correctly made and that the abdominal contents which protruded have been properly reduced and lie out of harm's way in the cavity of the abdomen. The matter of retention is that which now concerns us, and this, under any and all circumstances, must be perfect to avert possible serious consequences. Any form of injection treatment is barred until such adjustment of a truss has been accomplished as will retain the abdominal contents with the same degree of certainty and perfection as if the breach were securely sutured.

A common error of those who essay to fit trusses in cases of inguinal hernia, is to place the pad so that it impinges on the pubic bone, makes undue pressure on the spermatic cord and obstructs the nerve and blood supply of the genital organs. Sufficient space should be left between the pad and the bone to permit the finger to be inserted. The truss must ride free of the pubic bone.

The character of the pad to be used is an important matter. Whenever it is possible it is preferable to use a hard, polished pad on account of its perfect cleanliness. The pad to be used in inguinal hernia should be constructed so that its upper end is deeper than the lower. This insures the proper pressure at the internal ring and not at the external ring where pressure is usually erroneously applied.

The use of a large pad is, as a rule, to be avoided except in extremely old cases in which the external ring is very large, and in those cases in which the abdomen is large and pendulous. As a usual thing a suitable pad for inguinal hernia is about the size of a two-thirds longitudinal section of a hen's egg. In femoral hernia, a pad about the size of a small walnut is the only one that I would advise to be used. If a larger one is adjusted, it will press upon the femoral artery and vein and interfere with the circulation.

In oblique hernia, it is imperative in order to secure retention, to apply the pad so that it will make such pressure as will prevent the abdominal contents from entering the internal ring since, if this happens, the peritoneal sac, intestine or omentum, as the case may be, readily slips down the inguinal canal and emerges from the external ring beneath and below the pad, notwithstanding truss-pressure, or protrudes and causes an enlargement above the pad.

In femoral hernia, the pressure should be over and slightly above Poupart's ligament and to the inner side of the femoral vein. A femoral pad should also be constructed so that its upper end is deeper than the lower, that its greatest pressure may be directly over the inner opening of the femoral canal. If its thickest or deepest part is at the lower end, the gut will slip into the femoral canal and wedge itself under the pad. In such instances, if it does not protrude beyond the pad, pressure upon it in the femoral canal will be so great as to cause extreme suffering and enhance the chance of strangulation.

The recumbent is the most desirable position for the adjustment of a truss in inguinal or femoral hernia, the weight of the contents of the abdominal cavity tending to draw the portion which previously protruded from the ring away from the site of rupture, and admit of complete pad adjustment which, when the patient resumes the erect attitude, will hold the breach, or enlarged and inguinal canal, in so firm a manner as to prevent the bowel, sac or omentum, from starting to come out when it presents internally at the internal ring.

If the case be one of direct inguinal hernia, the pressure must necessarily be over the external ring, care being taken to avoid pressure on the pelvic bone and cord. Occasionally the internal ring is dragged down nearly to or quite opposite the external ring, in which case pressure is made upon both rings in the same direction. In such cases it is often necessary to use a special pad; likewise in long-standing cases in which atrophy of tissue renders the calibre of the breach unusually large.

The education of the patient, in the matter of not interfering with a truss properly adjusted, is usually neglected. Ninety-five per cent. of those applying to me who have been previously fitted with trusses I have found suffering with pad-pressure on the pubic bone and even below it. When I remonstrate with such patients, they reply that "There is where the rupture comes out." In many cases it requires patience and perseverance to convince the patient that the truss applied as above directed is properly adjusted. After a few weeks of complete retention, the pressure may be gradually re-

duced and still retain the hernia in a perfect manner.—DePew *(Medical Standard.)*

Grafting With Chicken Skin.—

An explosion had produced a deep defect in the leg of a young man, which was lined with small scraps of skin taken from the side of the breast under the wing of a spring chicken; the grafts included the derma and epidermis, and nearly all healed in place. The defect was completely lined with this skin in three sittings. It retained its specific vitality for a while, evidenced by the production of one small atrophied feather, but soon healed into apparently normal human skin.—Francesco *(Weiner Klinische Rundschau.)*

* * *

In a woman of fifty, a small scratch on the dorsum of the left foot became erysipelatous and ultimately gangrenous. Careful treatment secured a healthy granulating sore, extending from two and a half inches above the ankle-joint to the roots of the toes, and right across the dorsum of the foot. Five grafts of about one-sixth inch each from a baby's skin were applied on the lower margin, on September 5th, 1900, four of which took well. On September 15th, from the breast of a chicken, fourteen dermo-epidermic grafts were taken, each fully one-third inch square, and immediately placed on the wound. This was dressed with boiled water and a film of sterilized gauze, covered with sterilized wool and gauze. On September 19th most of the grafts had taken, and ultimately only three failed to grow. The growth was rapid and good, and the resulting skin had all the characteristics of human skin.—Bianchi *(Gazetta degli Ospedali.)*

Discovery Affecting Future Food Supply.—

We learn from a competent authority that one of the latest developments in electro-thermics is the synthesis of oxydes of nitrogen from atmospheric air. The importance of such a discovery to the world at large cannot well be overestimated. It will be remembered that some years ago Sir William Crookes, when President of the British Association, called attention to the rapid diminution of the world's supply of nitrates and pointed out their enormous importance as fertilizers in increasing the productivity of the soil. It was maintained (and his conclusions have been to a considerable extent accepted by scientific people) that the areas of the earth that could be devoted to culture of cereals were rapidly decreasing, and that unless some means could be discovered of making them produce more cereals than they now do, the growing population of the world would, within a comparatively short period, cause the consumption of these great food-stuffs to far exceed the supply. Nitrogen, of course, is the base of all fertilizers, and while there are not in existence natural beds of nitrate deposits in anything like sufficient quantity to supply fertilizing material for the purpose indicated, Sir William pointed out that if a method of "fixing" atmospheric nitrogen could be discovered it would solve the difficulty. If this method has now been found we have before us one of the greatest boons that have ever come to the human race. Cyanide of potassium is also one of the practical achievements of this new discovery and its use in the industrial arts is of widespread importance, especially in the economic separation of gold. As for the nitric acid thus made, it is absolutely pure, of standard specific gravity, and produced for one-eighth of the cost of the commercial variety. The new Century starts out with no abatement of the marvelous speculative energy that so distinguished its predecessor. And electro-metallurgy is still absolutely in its infancy.—Editorial *(The Sun,* New York.)

The Tonsil a Portal of Infection.—

The normal tonsil has a physiological function, probably protective to the organism; and, being in itself often diseased, this physiological function is often impaired, and instead of being protective, it becomes a nidus for the growth and distribution of pathogenic organisms and their poisonous products in the system at large. Doubtless many grave and fatal general infections have their origin in this gland.

If the exanthemata (especially scarlatina) are of bacterial origin, the tonsil acts in part as port of entry. Again, acute articular rheumatism, endocarditis and chorea, in a great majority of cases are due to the action of attenuated bacteria, their toxines, or both, entering the general system through a diseased tonsil.

In rare cases of typhoid fever in which no

intestinal ulcerations can be demonstrated, the similarity of the tonsillar tissue and Peyer's patches suggests the portal of entry of the Eberth bacillus.

Scrofulosis is often associated with diseased tonsillar tissue, and the tubercle bacillus often enters the system by this route.

The tonsil is too little examined at necropsies, which act might afford light regarding fevers of uncertain origin.—Ullman *(Medical News.)*

Uranium Rays to Enhance X-Rays.—

A screen of fine linen is impregnated with a solution of uranium—the source of the Becquerel rays,—and suspended between the vacuum tube and the subject at a point where the X-ray must pass through it. The shadows cast on the fluoroscope are much clearer and more distinct, and the contrasts are sharper than by any other *technique.* The finished actinograms are likewise exceptionally distinct, even with obese subjects.—Grummach *(Bulletin Sociêtè des Hôpitaux de Paris.)*

Appendix, Carcinoma of.—

The diagnosis of this affection is extremely difficult owing to the absence of distinctive symptoms in the early stages. Attention is first directed to the iliac region by the onset of pain and the presence of tumefaction, and when these are manifest the growth is usually well advanced. There is, ordinarily, no interference with the digestive function until the growth has invaded the cœcum or the large or small intestine. The diseases for which carcinomatous appendix is most apt to be mistaken are: Cyst of the appendix, calculi, tuberculosis (of the so-called neoplastic form), impacted fæces in cœcum or the small intestine. In many instances only an exploratory section will secure a positive diagnosis. If the appendix is found to be the seat of a new growth, in order to secure its complete removal the head of the colon should be resected, and should the growth have visibly extended beyond the appendix, a more extensive resection may be indicated.—Hurdon *(Bulletin Johns Hopkins Hospital.)*

Ruptured Gravid Tube.—

Operate as soon as possible. Pay no attention to the transuded blood because such will be rapidly absorbed. It is best to give patients twenty-four hours in the elevated-hip position after operation, because the blood within the peritoneum is more certainly absorbed, and also because the heart and respiratory centres are better nourished in this way. To replace the lost blood, employ rectal and subcutaneous injections of normal saline solution.—Flatau *(Monatschrift für Geburtshulfe und Gynakologie.)*

[Note.—This is corroborative of the points made by Doctor H. W. Longyear in his paper on Ectopic Pregnancy published in the June number of this Journal—pp. 71 and 72.—Ed.]

Instruments, Disinfection of.—

The official spirit of soap of the German Pharmacopœia offers a convenient means of effectually sterilizing surgical instruments. This spirit is made by combining six parts of olive oil with seven parts of caustic potash, subsequently diluting with thirty parts of alcohol and seventeen of water.—The caustic action of the potash is neutralized by the olive oil and water.

Instruments thoroughly washed with this solution, or simply wrapped snugly in cotton saturated therewith, may be kept aseptic for considerable periods of time; exclusion of air is an important consideration.

The same agent may be employed to disinfect the hands of the operator, or skin of the patient, as it is harmless even when applied in full strength.—*Deutsche Medizinal-Zeitung.*

Methylene Blue as a Germicide.—

Methylene blue, in saturated solution, or even more dilute mixtures (ten drops to ten cubic centimetres of liquid culture), arrests the development of bacteria ordinarily found in the vagino-uterine passages; it has no inhibitive effects on the growth of the *Bacillus subtilis.*—Chalier-Vivi *(Comptes rendus de la Société de Biologie.)*

Warty Growths on Genitals.—

These, especially in the male, are always to be suspected of malignancy, no matter how innocent they seem. They should be either left alone, or thoroughly removed by knife or cautery—imperfect attempts at destruction are especially to be avoided, there being many cases recorded in which they have apparently stimulated a benign growth to malignancy.—Gottheil.

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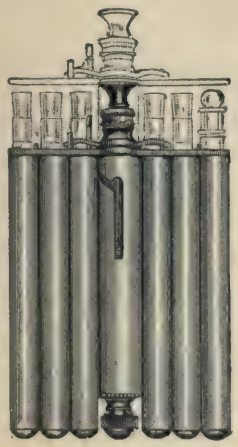

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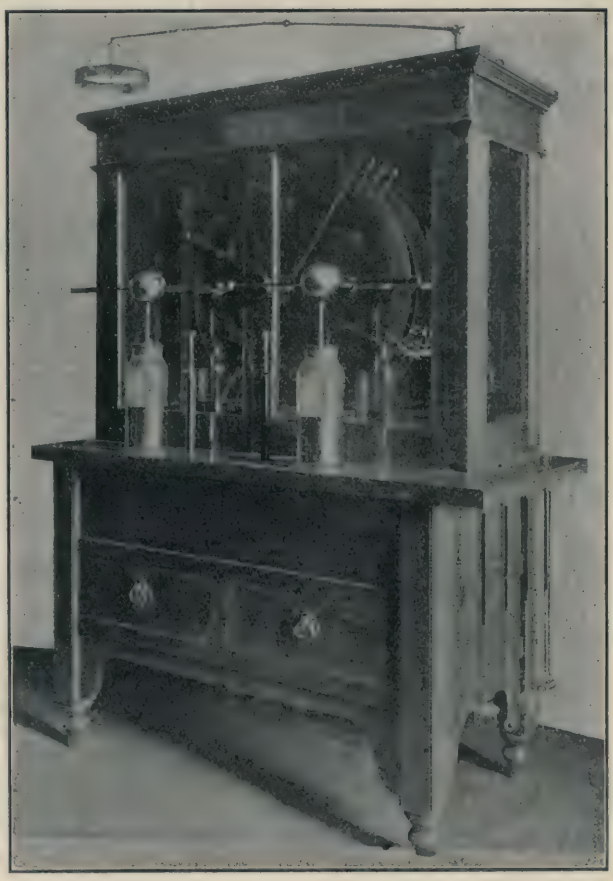

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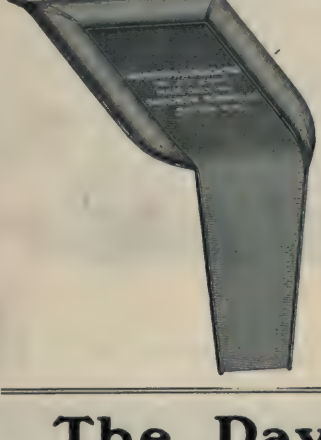

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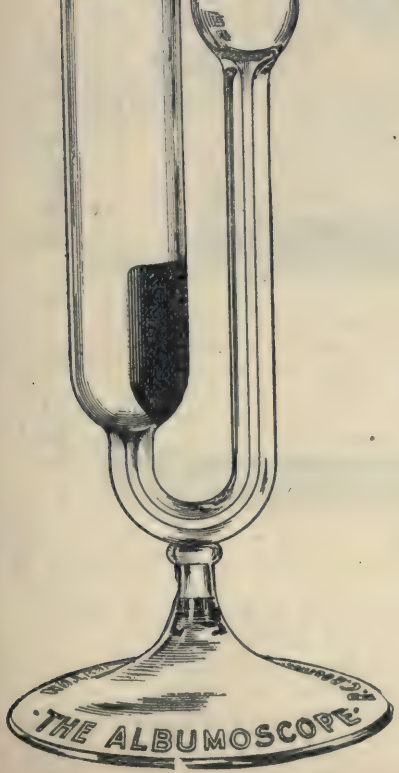

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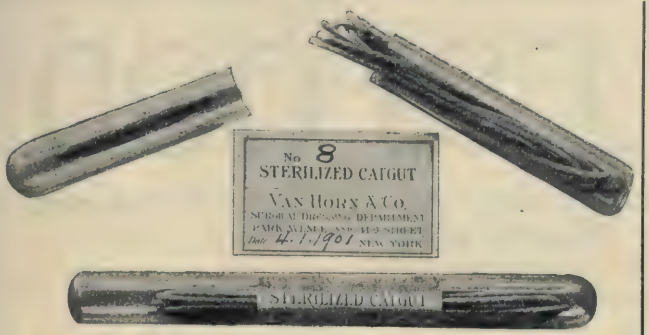

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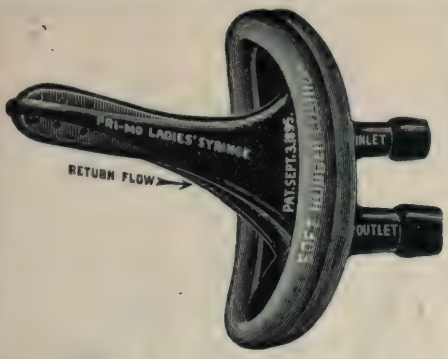

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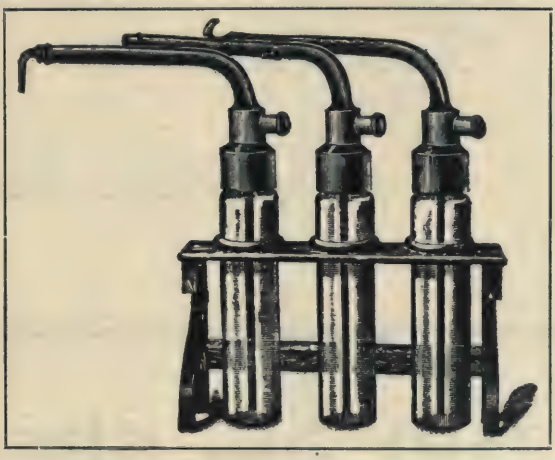

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What is Said of Us

Dr. S. C. J. Ostrom, of Saginaw, W. S., writes:

Men seldom write a postscript—and thus mix business and sentiment.—But I must compliment you upon the appearance and character of the Detroit Medical Journal. The general make-up is clean, with all leading articles scholarly and interesting. The paper on "Cannabis Indica" alone is worth a year's subscription. The medical profession know a good thing when they see it, and therefore the success of the venture is assured. Make the prescription department a little more prominent, and don't forget to flash a little wit along the pathway of wisdom.

Dr. Arthur I. Brown, Holstein, Ont.:

I wish to congratulate you upon producing such an interesting journal. The information is essentially up to date and practical, which latter faculty is specially valuable to a country practitioner. So many of the medical journals are filled with matter which is all right in its place, but of very little value at the bedside, that it is refreshing to look over your periodical. The article on "Cannabis Indica" is an admirable one.

I will be pleased to become a subscriber, and wishing you every success in your effort to have a satisfactory medical publication.

F. B. Kilmer, Editor of Red Cross Notes, Johnson & Johnson, New Brunswick, N. J., writes:

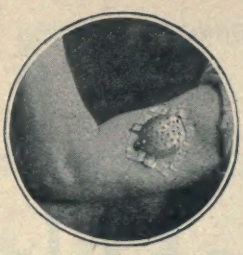
I should judge that this is the kind of a journal that will be appreciated by the medical profession. . . . I wish you every success.

Dr. J. D. Dunlop, Alpena, Mich.:

I congratulate you upon entering the publishing field and esteem your first number a credit to both editor and publisher.

Dr. W. E. Clark, St. Ignace, Mich.:

Allow me to congratulate you upon the handsome appearance and management of your new venture. . . . . Wishing you success.



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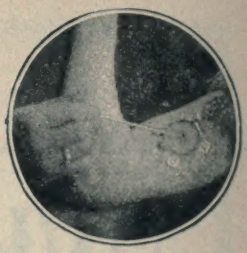

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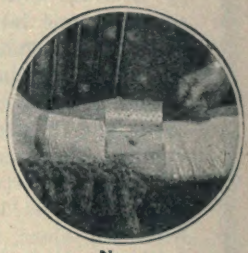

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